21 August, 1997

EDMS FCG
ACMS and JEDMICS Status Meeting
13 - 14 August 1997

Summary of Meeting

On 13 and 14 August 1997, the Army Materiel Command (AMC) Engineering Data Management (EDMS) Functional Coordinating Group (FCG) held a meeting at CECOM. The purpose was to discuss the status of and approach for the initiative to develop a Performance Specification for the Army's Automated Configuration Management System (ACMS). Also provided at the meeting were information briefings on related projects and the Joint Engineering Data Management Information Control System (JEDMICS) implementation efforts. Mr. Dale Adams, AMC Principal Deputy for Acquisition, attended the afternoon session on August 14th where he received a wrap-up summary of the ACMS and related efforts. At his request, he was also provided briefings on the status of Army's implementation of JEDMICS.

Mr. Gordon Ney from theU.S. Army Industrial Engineering Activity (IEA) chaired the meeting. The meeting was well attended by representatives from the various Major Subordinate Commands (MSCs). The Task Force achieved a consensus during this meeting that the ACMS requirements development needs to be forward thinking and creative so as to break the old paradigm, and transitionfrom Document Centric to Product Centric Data Management. The list of attendees is included in Appendix A. Copies of briefings given are provided in Appendix B. A zipped copy of all the pdf files associated with this set of minutes can be obtained here (ftp://www-iea.ria.army.mil/outgoing/ai/eng_data/).

Day 1: Wednesday, 13 August 1997

ACMS Task Force Status Meeting Introduction

Mr. Gordon Ney opened the meeting by welcoming the attendees. Mr. Rick Uldrich, the CECOM host, provided administrative and logistical information for the audience.

Mr. Ney indicated that the meeting's primary purpose was to establish the process for defining ACMS performance requirements. He emphasized the importance of discussing the approach and obtaining concurrence from the FCG on how to proceed. Mr. Ney also stated that the meeting would accomplish the following:

1. Cover what transpired since last meeting.
2. Share information on related efforts.
3. Discuss status of JEDMICS implementation.

In response to a question from the audience, Mr. Ney indicated that the invitees to this meeting included the primary and secondary members of the EDMS FCG and individuals who attended the last ACMS Task Force meeting. It was recommended that in the future, representatives from the depots be explicitly invited. **ACTION: Mr. Newman, IOC representative, should identify Depot representatives and give the names to Mr. Ney, so that they can be included on the distribution list for the next meeting**. Mr. Ney also stated that the PEO/PM community needed to be involved in this effort. Ms. Gayle Booker also suggested that the weapon system software development community needed to be involved. Mr. Ney stated that one of the primary functions of the principal task force member from each site is to act as a conduit between this effort and the potential users at their site. **ACTION: The principal task force member from each organization and site needs to make sure that their user community is solicited for input and if a person who should participate in the meeting is identified, furnish their name to Mr. Ney so that they can be invited to the meeting.**

Mr. Ney's briefing included the agenda for the remainder of the meeting. The topics covered by the meeting are listed below for the reader's convenience:

- Background on ACMS,

- ACMS Performance Specification Approach and Timeline,
- ACMS Boundaries,
- Crusader Program CITIS and GM C4 Program,
- CBDCOM PDM Status Briefing,
- CMStat Evaluation Results,
- Automated Document Conversion System,
- Web Based Acquisition,
- CECOM PDM Demonstration,
- MSC Envisioning Meeting – Description,
- Envisioning Meeting Data Call Discussion,
- ACMS Preliminary Implementation Strategy,
- ACMS Wrap-Up, and
- Review Status of JEDMICS Implementation.

Background on ACMS

Mr. Ney presented a briefing that provided background and context for the ACMS initiative. His briefing covered the following topics:

- Current Engineering Data Environment
- Goals of Acquisition Reform
- How do we achieve those goals?
- What is PDM?
- PDM Functions
- PDM Benefits
- ACMS Key Events

A key theme in Mr. Ney's briefing was the premise that the functionality provided by many commercially available Product Data Management (PDM) systems includes the kinds of capabilities that the Army will want in ACMS. In his briefing, Mr. Ney noted some of the key engineering data management challenges facing the Army. These included the need to manage "intelligent" data, which today's systems cannot do, and the need to manage and share metadata about managed Army engineering data.

Mr. Ney noted that the goals of acquisition reform were moving the Army towards less government ownership of data while retaining the requirement to continue to have access to a system's technical data. Mr. Ney observed that PDM-like capabilities should help the Army accomplish this.

To provide the audience with a better understanding of PDM, Mr. Ney summarized some of the key features typically found in a commercial PDM system. He noted that many of the products were moving quickly towards web-based applications as opposed to client server architectures. It was Mr. Ney's opinion that this is the direction the Army will want to go as well.

During his briefing, Mr. Ney noted that workflow management is a capability that is available in many kinds of systems. Specifically, Mr. Ney observed that any workflow management capabilities provided by ACMS must be integrated or interoperable with the JCALS workflow management capability. He made this point because the Joint Computer-aided Acquisition and Logistics Support (JCALS) system will provide the essential computer infrastructure for the Army's logistics community. Mr. Lou Conter, HQ AMC (JCALS)) was asked if there were a functional description of the workflow capability within JCALS? **ACTION: Mr. Lou Conter will provide whatever information he can find**.

The FCG briefly discussed the need for security in the ACMS. The group recognized that the Army has to define its security requirements, in particular technical data posted on Internet Websites, which is being addressed at the HQ AMC Headquarters. *Editor's Note*: The Minutes of the Acquistion Steering Committee 5-6 Aug 97 meeting address this topic and are now available on the ACMS homepage.

Mr. Ney also discussed the benefits of PDM. He noted that one of the main consumers of an engineer's time is the search for needed engineering data. Studies have shown that as much as 40 percent of an engineer's time can be wasted looking for desired data. Mr. Ney stated that he believes a PDM-like

capability can alleviate this condition.

Mr. Ney provided the EDMS FCG with a review of ACMS's history. He also reviewed the ACMS vision statement and concept of operations developed at the last meeting. Mr. Ney presented the guiding principles for developing the ACMS Performance Specification.

At the conclusion of this briefing, Mr. Ney reminded the audience that funding was a significant issue for ACMS. As of this time, there is no funding wedge.

ACMS Performance Specification Approach and Timeline

Mr. Jim Cox of BDM briefed the ACMS Task Force on the approach proposed for developing the ACMS Performance Specification. He indicated that the specific objectives for the project were as follows:

- Facilitate the ACMS Task Force in articulating ACMS vision in terms of processes supported and system capabilities required.
- Gather and analyze existing Army configuration management, Tech Loop, and repository requirements data.
- Formulate ACMS performance requirements from data collected.
- Write and deliver an ACMS Performance Specification.
- Acquire product survey information on existing PDM vendors and products.

The essence of the approach briefed was for BDM to develop a strawperson ACMS process model (an indentured list of steps), collect and map existing requirements from Configuration Management Information System (CMIS) and Technical Data / Configuration Management System (TD/CMS)to the process model, make that mapping available to the MSCs for review and modification, and then conduct an ACMS Envisioning Meeting where the process model and requirements are discussed and modified as a group. Following the Envisioning Meeting, BDM would develop a draft performance specification that will be reviewed and modified by the MSCs. Based on MSC comments, BDM would then revise the performance specification and publish a final version. Concern was expressed in using CMIS requirements as the initial starting point. It was proposed that we should use a blank sheet of paper. Use old requirements only as check list for processes not system functions. Ms Martinez asked if there were any existing performance specifications for CM from other organizations that may be a better starting point than bringing baggage of old CM functions that may not be required in new system. STEP AP 203 and Military Standard 2549 are some potential starting points.

As a result of Mr. Cox's briefing and the partnership with the Army on this project, it was decided that less effort will be devoted to capturing old requirements and more time spent on developing an adequate ACMS process model and documenting commercial PDM-like capabilities. **ACTION: All task force members are to attempt to locate commercial PDM system specifications that could be used as input into the ACMS specification.** These will be made available to the MSCs for their use as a framework for formulating their own understanding of the required capabilities. The goals are to ensure that future Army processes to be supported by ACMS are understood and to make certain that the ACMS supports a product centric approach to managing and using engineering data rather than the old document centric paradigm.

Although not briefed in detail, Mr. Cox's briefing included discussions of the requirements development and dispositioning strategy BDM will use on this project. Key requirements metadata was also described. This data will be used by the requirements tracking system BDM intends to use. Mr. Cox's briefing also included a timeline that is expected to be extended into January or February of 1998 based on guidance provided by the ACMS Task Force.

ACMS Boundaries

Mr. Cox also presented a briefing to establish boundaries for ACMS. He asserted that the boundaries of ACMS are established by specifying the ACMS user communities, the functional processes supported, the capabilities ACMS will provide, and the interfaces ACMS must support. To that end, Mr. Cox presented a tentative list of users, a draft ACMS process model (indentured list), and a list of possible capabilities. He also identified a few general interface candidates for ACMS.

Based on the discussion surrounding Mr. Cox's briefing, it was determined that one cannot really bound the ACMS user community or even specify who the primary users are likely to be. The key, in terms of users, is to recognize that anyone involved in an Integrated Product Team (IPT) is a user. Also, it is important to recognize that users will locate and retrieve data from a product structure perspective rather than a document structure perspective. This is a new paradigm for the Army, which in the past has managed engineering data from a document viewpoint. Lastly, it was observed that in the new environment, different forms of data (intelligent data) will be managed and this will require new, modern tools with which the general user community is not acquainted. This last point means it will be difficult for users to articulate requirements.

The draft ACMS process model stimulated a useful discussion on processes that ACMS must support. It was recognized that performing interface management was going to be an important part of the ACMS process model. Managing metadata for engineering data also needs to be considered as a part of the process supported. The ACMS Task Force confirmed that ACMS should control repository data (Army and non-Army data) and suggested the following subprocesses:

- Provide visibility into repositories,
- Manage data change across repositories,
- Provide data vaulting (check-in and out),
- Provide data access control and security,
- Create and maintain product structures,
- Control data input into repositories, and
- Notify users of data change status (Note: This may be considered part of vaulting).

Consensus was reached that the Tech Loop process starts at the time the Procurement Work Directive (PWD) is generated and ends with the certification that the Technical Data Package (TDP) is suitable for procurement**.**

ACTION: IEA and BDM will investigate the Vault, Processes, Simple, and Complex Links Integration and User Interface (VPSCii) description of PDM as part of the effort to develop a draft ACM process model.

Crusader CITIS & GM C4 Experience

Mr.Deane Stanley of EDS briefed the Army's Crusader Contractor Integrated Technical Information System (CITIS) effort and how they leveraged lessons learned from General Motor's (GM's) experience with their C4 program. EDS's mission was to act as change agent for General Motors, save Information Technology money, and reduce design cycle from concept to making the car from 6 years to 3 years.

Mr. Stanley summarized the C4 program by noting that GM's history was one of islands of automation prior to this effort. No corporate wide strategy existed for guidance. They had 14 different CAD vendors and 20 versions of their Corporate Graphics Solution (CGS). The goal of the GM C4 program was 100% electronic data sharing. This was to be accomplished via a simplified and standardized engineering environment with the intent to reduce product development time and costs. Mr. Stanley noted that GM has been at this for 10 years and they are not yet there. He also noted that GM initially started with a Commercial Off-The-Self (COTS) product (Sherpa), then went to custom software, and are now going back to COTS software.

In his briefing of the Crusader CITIS effort, Mr. Stanley observed that the Crusader program was an acquisition reform effort. As a result, they had significant flexibility in searching for solutions and cutting red tape. He indicated there was a concept of operations for the CITIS program and a performance specification for the Integrated Data Environment (IDE) with numerous implied or derived requirements. IEA asked Mr. Stanley during a break for copies of the concept of operations and the requirements documentation. **ACTION: IEA will pursue getting copies of these documents**.

They implemented a COTS based solution with cost sensitivity to application integration. This was due to lessons they learned during the GM C4 program. During that effort they found that extensive application customization made it difficult for GM to move to new versions. Additionally, keeping the upgrades of the PDM system, operating system, and interfacing applications synchronized was difficult. Mr. Stanley noted

that PDM vendors tend to issue releases one to two times a year. As a result, upgrades are a significant challenge according to Mr. Stanley.

Mr. Stanley commented that they began the Crusader program with the direction that they were not supposed to get user requirements. Apparently, this direction was superseded at some point and requirements were documented. They decided that a PDM system would be at the heart of their CITIS program. At the time, there were 13 on the market. He indicated that there are now approximately 17. CIMData was used as a third party integrator for the effort. CIMData looked at the 13 PDM systems, reduced the set to five possibilities, and then reduced the candidates to three. Some PDM systems were eliminated because they did not have a modern architecture (e.g., object oriented). Metaphase 2, IBM's Product Manager, and Sherpa were the final three. At the time, Sherpa and IBM did not have a graphical interface. The product selection process involved visiting the vendor's development centers, asking for written responses, and putting together a demonstration within 10 days. EDS had not recommended Metaphase 2 initially because it was very new. However, only Metaphase 2 passed the test. At this point, EDS performed a CITIS requirements review for the program.

Mr. Stanley shared a couple of observations about adopting modern PDM systems. First, one must learn from scratch the customization capabilities of the selected product, since few people know the products well. Second, modern PDM products such as MetaPhase 2 require robust infrastructures to perform as desired. Mr. Stanley did note, however, that the move towards web-based capabilities is mitigating this situation a bit.

Training was a point Mr. Stanley particularly noted in his briefing. He indicated that PDM software is essentially Groupware. It should be trained in group environments where the supported process is being exercised to be effective. Simple feature-function based training does not work well.

Mr. Stanley commented on the Crusader CITIS program's growth to maturity. The CITIS went live on 31 July 1995 between Picatinny and Minneapolis. In September 1995, Crusader flunked its system requirements review. With the program in trouble, senior management became interested. The CITIS program went through five major releases and many incremental releases. Eventually, web capabilities were included. Via the web, they are able to check data in and out, view data, comment, and sign off on work. Today there are approximately 900 users of the system.

Near the end of Mr. Stanley's briefing, he described core CITIS functionality. For the Crusader program, CMStat and MetaPhase are working together to bolster the configuration management capabilities.

Following his briefing, Mr. Stanley entertained several questions. The points he made during this portion of the briefing included the following:

- Smaller programs can use web technology to hide excess PDM functions. However, they still need to establish a common data model with web access.
- Initially, when GM reduced the number CAD systems, they provided tools to suppliers. Now, however, GM is requiring vendors to conform to GM's environment.
- Although the Crusader program did not have to deal with legacy data per se; there were 25 years worth of data from Picatinny that served as the requirements set and 15 years of Advanced Technology Demonstrations (ATDs) with which they had to deal. They did not do mass translations. Instead, translations were done as needed. At that time of translation, the data was configuration managed.
- When dealing with environments involving multiple CAD systems, one needs to carefully consider whether geometry needs to be maintained when moving between tools. Translators cause a performance problem and often the geometry data is not really needed. People will find or acquire the tools to work with the data when they need the geometry data. The real challenge is navigating and finding the data, not finding the tool to work with the data.

CMStat Test Results (No briefing slides or file)

Ms. Gayle Booker , EDMS PMOprovided a summary of the results of the CMStat Test. The issue at hand was given the failure of the CMIS tests, could the Army use a COTS configuration management package. As part of this effort, they made certain the vendor knew the Army was testing to determine feasibility

only, they were using seven-year-old requirements, and no intent to purchase was implied by the success or failure of the test. Ms. Booker indicated that the evaluation is essentially completed.

There were three major elements of the task. First, a data map from the legacy system into the COTS product was produced. Second, a data conversion from the MICOM database was accomplished. Lastly, screen displays and reports for manipulating the data were evaluated.

Ms. Booker reported that 1.5 GB of MICOM data were converted. This constituted 746,871 drawings, specifications, and associated lists.

They wrote 55 scripts to convert the data. It took 40 hours to convert the data, but since the purchase of a Sun environment, the conversion effort has dropped to 20 hours.

Regarding the evaluation of reports in the COTS system (e.g., Generation Breakdown List (GBL), Technical Data Package List (TDPL), and Parts List (PL)), Ms. Booker noted that the COTS reports were almost 90% the same as those in TD/CMS. This commonality is based on content, but not layout or formats.

The conversion itself involved 41 tables (roughly 84% of the data) . Many of the candidate tables were system or MICOM specific and did not need to be converted. Apparently, 14 % of the CM data could not be converted into the COTS system.

The test team wrote 35 test procedures. System functionality was fully tested by 12 by procedures.

The test team concluded that COTS is a viable alternative for the Army. It is time consuming and expensive, however, to do COTS conversions. Part of the difficulty is the language barrier between the commercial world and DoD. Data mapping is also a key. Data mapping is system unique and must be done for every data element. Test procedures are application unique. They involve point and click steps which are unique for the particular system. If the Army decides to go to a new COTS system, it must be a long term relationship because of the effort required to convert and test.

CBDCOM PDM Status Briefing

Mr. Ney presented for Mike Cantrell of CBDCOM. The presentation consisted of a brief status review and then a demonstration of the CBDCOM PDM system from Workgroup Technologies.

Mr. Ney indicated that CBDCOM is continuing to migrate legacy data. They have found that the process takes longer than planned. They are loading the data from TD/CMS and aperture cards. They are experiencing difficulties in matching aperture card hollerith data with TD/CMS. Next, CBDCOM plans to load native Computervision, AutoCAD, and Interleaf files.

CBDCOM also has found they must spend time educating PDM vendor. The Army's release management is different from the commercial sector (commercial sector would not release a drawing with an outstanding ECP). In addition, the current TD/CMS reports have many hidden complexities. On occasion, the data is actually processed by the report program rather than the database. Lastly, TD/CMS-E hides a looping problem that has to be solved during migration. Based on their experience, CBDCOM suggests the ACMS Task Force consider meeting with vendors from whom the Army has purchased PDM systems to get their perspectives and lessons learned.

Mr. Ney then proceeded to demonstrate the CBDCOM PDM system.

Automated Document Conversion System (ADCS)

Mr. Paul Behrens , EDMS PMO, briefed the ADCS program. Its goals are to establish a document conversion infrastructure that complements the repository infrastructure and to initiate a process that makes the Army "completely" digital by 2002.

Audre (Vector Systems), VPMAX software from ADCS Inc, and Intergraph will provide conversion capability for Army sites as part of ADCS under CAD2 Intergraph Contract. ADCS conversion priority list within the Army for technical data was established by the Army DCSLOG and Logistics Integration Activity. Mr. Behrens indicated that he had several copies of the VP MAX conversion software by ADCS,

Inc. He also stated that the Army ADCS funds are controlled directly from AMC via a pass through to the EDMS Program Manager's office.

There are six levels of conversion that can be accomplished by the ADCS conversion contractors. These levels are identified below:

- Level 1 - raster only,
- Level 2 - raster plus cleanup,
- Level 3 - automatic vectorization,
- Level 4 - text and auto vectorization,
- Level 5 - enhanced vectorization, and
- Level 6 - CAD Perfect (means geometric accuracy with associated dimensioning).

Mr. Behrens surfaced one issue. There is more to converting the data than just capturing it. One must also capture the metadata, so someone else can find the data. He also noted that one must also validate the quality of the conversion to ensure that it can be used.

Web Based Acquisition

Mr. Behrens also briefed the results of a Web-Based Acquisition meeting that took place the previous week. The meeting's objectives were to make decisions regarding the following topics:

- A single face to industry.
- Procurement interface.
- Technical data interface.
- AMC wide access.
- Architecture.
- Security.

Mr. Behrens noted that the Land Information Warfare Activity is defining web security requirements. **ACTION: Mr. Behrens will provide a copy to Gordon Ney for distribution to EDMS FCG.**

Mr. Ney related that he had accepted an assignment at the meeting for the EDMS FCG to establish a working group to determine TDP packaging standards for web acquisition. **ACTION: Mr. Ney will request nominations from the FCG and will charter a working group to develop TDP packaging standards for use in web-based acquisition.**

Minutes of the AMC Web Based Acquisition meeting are now available and can be found on the ACMS Homepage.

Day 2: Thursday, 14 August 1997

General Discussion

It was noted from the audience that the Army needs to carefully consider how they are going to define and implement ACMS. The Army needs to look at data differently for ACMS than they do today. In particular, the Army needs to adopt a product or part centric approach to managing engineering data rather than today's document centric perspective. A concern was raised that most folks do not know how to think of their data and jobs given a PDM-like environment and capability. The Army runs the risk of asking people to specify functional requirements without really understanding the kinds functional capabilities that are available in the PDM industry. It was also suggest that if the interfaces and APIs of commercial systems are accessible, the Army should be able to make any of the commercial products work.

Mr. Ney responded to these comments by agreeing that the team will look at both the new, desired process and the PDM-like capabilities the market offers.

A concern was also raised that the EDMS PM would be given responsibility to define, develop, and test a system in which they are not really sufficiently expert to succeed. Later in the meeting, the group was assured that the ACMS Task Force would be kept fully involved in the entire process.

CECOM PDM Demonstration (No slides)

Mr. Gary Salomon briefly introduced the CECOM PDM system to the audience. This was followed by a demonstration performed by Ms. Ann Miniti. Mr. Salomon explained that the CECOM PDM system is based on Auto-trol Technology Centra 2000. The PDM system is intended to support CECOM's Bid Set process. In Phase I, they are migrating TD/CMS data. Eventually, they plan to link to JEDMICS for the engineering data.

Mr. Salomon noted for the group that the stimulus for this project came from the Flexible Computer IntegratedManufacturing (FCIM) initiative. During that effort, they became aware of what a barrier technical data processing was and the benefits of sharing intelligent data. They realized, however, that they would need to change processes and acquire modern tools to manage the complex, intelligent data.

Ms.Ann Miniti noted that CECOM spent 2.5 years learning about PDM systems. This involved receiving 20 vendor demonstrations and training on three systems. The most important selection criteria ended up being which product was most liked by the users.

During the demonstration, the group learned that the system is based on an Oracle database running on a Sun 1000 server. Clients can be Unix, Windows NT, or Windows 95 computers. Centra 2000 is not CAD system dependent, but does have direct interfaces with AutoCAD and ProEngineer. Centra 2000 functionality includes the following:

- Centralized messaging,
- Folder and part browsers,
- Search tools,
- Vaulting,
- Application launching,
- Historical snapshots,
- Workflow,
- Change management, and
- System administration.

Interfaces with other PDM systems can be accomplished via Centra 2000's application program interface (API). CECOM eventually plans to interface the system with JEDMICS. It was also explainedthat Centra 2000 either has or will have web-based access capabilities for locating, viewing, and printing drawings.

Centra 2000 is primarily part centric in that parts and assemblies are structured hierarchically and engineering data is associated to parts. It was explained that documents can also be structured hierarchically and that hierarchy is carried along with the association to the part. However, it appears that the full document structure is not readily visible when accessing the data from the part perspective.

ACMS Task Force Meeting: Day 1 Summary

Mr. Ney presented a brief summary of the directions provided and actions assigned from Wednesday's meeting. According to Mr. Ney the Task Force achieved a consensus that the approach to developing the ACMS Performance Specification needed to be more creative and forward thinking with less dependency on prior requirements (e.g., CMIS and TD/CMS requirements). To accommodate this guidance, Mr. Ney proposed that the performance specification effort be modified slightly to accomplish the following tasks prior to the ACMS Envisioning Meeting:

- Continue with strawperson ACMS process model;
- Examine the Vault, Processes, Simple, and Complex Links Integration and Interaction (VPSCII) description of PDM; and
- Incorporate commercially available PDM capabilities into the information provided to the MSCs prior to the ACMS Envisioning Meeting.

A concern was raised from the audience that the MSC representatives as a whole were not sufficiently knowledgeable to collectively write a performance specification for ACMS. It was suggested that the group focus on identifying the major capabilities desired and then invite three or four vendors in to review

the desires, demonstrate their systems, and then allow the Army to use and evaluate their systems to see how they address the major capabilities. After a few weeks or a month with each system, the Army could down select to a couple of systems, conduct additional evaluations and learn more, and then either write the ACMS Performance Specification or select a product. It was suggested that detailed dialog with vendors and third party consultants occur to become more knowledgeableabout systems. One approach is to identify minimum essential requirements for ACMS to narrow the field to ten vendors or less. Requirements include: items such as Oracle database, true workflow capabilities, and about 5 other PDM system key capabilities. It was suggested we establish working group for minimum essential ACMS requirements.

Mr. Ney responded by noting that IEA and BDM were exploring the possibility of involving CIMData or D.H. Brown in the effort. As recoginized PDM experts, one of these two would provide additional insights into what capabilities are commercially available and whether the performance specification we develop will be understandable to PDM vendors.

Mr. Ney also presented a list of action items from the first day. The list consisted of the following actions:

- Each MSC is to collect examples of commercial specifications relevant to ACMS,
- IEA is to request the Crusader CITIS CONOPS and requirements set, and
- The EDMS FCG is to establish a working group to determine TDP packaging for web acquisition strategy.

Based on Gordon Ney's presentation of Consensus Summary and Action Items from 13 August session, the Group indicated concurrence in the points presented.

It was recommended that a small group be formed to define a strawperson ACMS process model and capabilities list. **ACTION: BDM will be drafting these and they will be sent to the MSCs for their review prior to the ACMS Envisioning Meeting**.

MSC Envisioning Meeting - Description

Mr. Ed Dorchak of BDM described the planned meeting for assembling the MSCs to review and revise a draft ACMS process model and requirements. He began by stating that the fundamental assumptions behind BDM's approach included the realization that there may be new ways to use and manage engineering data with new capabilities. Additionally, there must be traceability back to the process steps that the MSCs will perform as a basis for rationalizing the need for particular capabilities. Mr. Dorchak noted that the effort should build upon the work CECOM and CBDCOM have already done in their PDM efforts.

Mr. Dorchak then presented the Envision Meeting objectives. These included developing a consensus on the scope of ACMS, identifying functional capabilities for ACMS within that scope, developing a consensus on relationship of ACMS to existing and planned systems, and identifying constraints (if any) on the ACMS operating environment, support, and performance.

The overall approach for the Envision Meeting involved BDM developing a draft of an ACMS process model and capability requirements. These will be made available to the MSCs prior to the meeting where they will discuss the model and capability requirements. The focus of the discussions will be to add, delete, or modify the process steps and capability requirements. Time also will be spent during the meeting identifying environmental, support, and performance constraints.

A recurring theme from the audience revealed itself again during this briefing. There does not appear to be agreement that the MSCs can reach consensus on all processes requiring ACMS support. Also, concern was expressed that too much attention might be placed on defining user needs when users may not really understand the potential for change. It was restated that the effort needs to focus on identifying the common, core capabilities and permit users to customize capabilities as needed. It was strongly recommended by one member of the audience that MSC recommendations and comments on the drafts of the ACMS process model and capability requirements be packaged prior to the Envision Meeting and presented at that time for discussion and comment.

ACTION: IEA and BDM will reevaluate timeline and dates for envisioning meeting in light of

guidance from this status review meeting.

Envisioning Meeting - Data Call

Mr. Dorchak also briefed the data call for the Envision Meeting. During this presentation, Mr. Dorchak described the kinds of data that the MSCs would work with and need to provide relative to the ACMS process model, required capabilities, interactions with other systems, and environmental, support, and performance constraints. An MSC representative suggested that continuity of operations requirements be included in either the support or environmental constraints.

Although the basic approach and types of data required were not challenged, the examples presented helped the group focus its concerns on the basis for developing requirements. The group was very concerned about too much emphasis on old requirements (CMIS and TD/CMS requirements) and old ways of doing business (document centric vs. product centric). There seemed to be much more willingness to start from scratch than was expected by IEA and BDM.

Not everyone wanted to be given a blank sheet of paper, so a compromise was reached. BDM will draft an ACMS process model as planned using the CMIS Business Process Model (BPM), the Corporate Logistics Model (CLM), and suggestions made at this status meeting. BDM also will develop a list of commercially available PDM-like capabilities to help stimulate thinking for those individuals who are not as familiar with PDM systems as CECOM and CBDCOM. The draft ACMS process model and list of candidate capabilities will be distributed to the MSCs who will then use both products to formulate ACMS requirements. It was agreed that the requirements should be mapped to the process model as revised by the individual MSCs.

Preliminary Implementation Strategy (No slides)

Ms. Booker provided a brief review of current thoughts on ACMS implementation during lunch. Ms. Booker informed the group that she had been designated as the ACMS Project Manager within the PM EDMS and she promised to take her direction from the EDMS FCG. The information Ms. Booker provided was very preliminary and no notes were taken during this presentation.

ACMS Task Force Meeting Wrap Up

Mr. Ney presented a briefing to close out the ACMS Task Force meeting and to inform Mr. Dale Adams, HQ AMC, Principal Deputy For Acquisition, and Mr. Jim Barbarello, CECOM, Logistics Readiness Center, as to what had occurred during the ACMS sessions. In his briefing, Mr. Ney reviewed the current state of engineering data in the Army and summarized PDM systems. He also discussed the approach for developing the ACMS Performance Specification. Mr. Ney noted that the meeting had resulted in a consensus that ACMS requirements development needs to be forward thinking and creative so as to break the old document centric paradigm in favor of a product centric paradigm.

Mr. Ney identified the information briefings the group received and then took questions from Mr. Adams. In response to questions, some of the following points were made:

- The purpose of the ACMS Performance Specification is to provide a basis for making an Army acquisition of a standard system.It is envisioned that the standard system will consist of one or more COTS software packages.
- Many PDM systems provide most of the desired capabilities, but at different levels. Whomever the Army selects will need to be a long-term partner to ensure the capabilities evolve into the set that the Army needs for managing and making available engineering data.
- The ACMS Task Force will strive for a standard, yet flexible system. The letter from MG Beauchamp called for a standard system. The Task Force will strive for a standard system, but if that ends up being the wrong answer they will adjust. Mr. Adams recommended that CECOM not change from existing system unless there is compelling business reason. Performance specification does not define solution, but defines interfaces.
- ACMS implementation is currently unfunded. **ACTION: Mr. Adams offered to investigate**

why the Joint Logistics System Center (JLSC) money programmed for the Configuration Management Information System (CMIS) and Procurement Data Support System (PDSS) and returned to the Army was not allocated to acquiring ACMS.

- The ACMS Performance Specification is contractually scheduled to be done by the end of calendar year 1997. Based on recommendations from this meeting, the schedule may need to slip a month or two.

At the conclusion of the briefing, Mr. Adams strongly encouraged the group to work together to develop and agree upon an ACMS Performance Specification. Focus on what can be agreed to, implement that portion, and live with what cannot be agreed to by the group. He charged the Task Force to move out on the performance specification and to implement a commercial-based solution.

Review Status of JEDMICS Implementation

Each MSC reviewed its status on the implementation of JEDMICS and the termination of DSREDS. The following list identifies who briefed.

Organization	Presenter
PM JEDMICS	John Montgomery
AMCOM (MICOM & ATCOM)	John Montgomery (EDMS PMO) Carla Crawford (AMCOM (P) RDEC)
CECOM	Steve Zukowski (CECOM-LRC)
IOC	Will Ensenat (IOC)
RIA	John Bender (RIA)
TACOM - Warren	Patricia Martinez (TACOM-WRN)
TACOM - ARDEC	Carol Sitroon (TACOM-ARDEC)

In general, each MSC reported on the history of their implementation effort, the current status of that effort, the projected events, outstanding issues, and recommendations. Refer to each briefing for additional details. The following paragraphs provide highlights from each presentation.

Mr. John Montgomery, EDMS PMO, presented a summary of JEDMICS status from the joint perspective. Mr. Henry Younger announced during this segment of the meeting that he will be stepping down as deputy PM for JEDMICS. This is a rotating position that will now be filled by the Air Force. Major Paul Houts, Air Force will rotate into HenryYounger position as Deputy Program Manager for JEDMICS PMO.

Ms. Carla Crawford and Mr. Montgomery presented the AMCOM(P) site status. Ms. Crawford reported from a functional perspective, while Mr. Montgomery described system aspects. Printers are a bottleneck. Software aspects of JEDMICS preclude connectivity of available printers to JEDMICS.

Mr. Steve Zukowski presented the status at HQ CECOM. **ACTION: John Montgomery will address the problem with copying platters for Continuity of Operations (COOP).** Version 2.5.1 of JEDMICS was supposed to have corrected problem

Mr. John Bender presented summary of RIA's status. During his presentation, Mr. Bender noted that poor quality CD-ROMs had been a problem. Since GSA has negotiated price of $3.79 per CD with Kodak for media, they expect the problem to be resolved.

Mr. Wil Ensenat from HQ IOC presented a summary of the status of the mini JEDMICS installations at the depots. Some MSCs charge depots a fee for access to weapon system data. Mr. Paul Behrens stated that the Army is the only service without high speed connectivity between JEDMICS sites. Mr. Adams recommend that all depots be invited to ACMS and EDMS FCG meetingsMs. Patricia Martinez from TACOM-Warren presented the status at the Warren site. She noteded that TACOM's drop dead date for

DSREDS is 30 September 1997.

Ms. Carol Sitroon from TACOM-ARDEC presented the status at Picatinny Arsenal. A major concern was the fact that by the time JEDMICS hardware was up and running the warranty had expired. She noted that Intergraph capability for JEDMICS 2.5 did not fully replace the functionality of DSREDS. Ms. Sitroon stated that ARDEC will be off DSREDS by 30 September 1997.

ACTION: Mr. Adams indicated he wanted to be kept informed on the progress of the ACMS Task Force and he suggested that at the next ACMS task force meeting that the status of the JEDMICS implementation effort be revisited. He noted that it is costing more to keep DSREDS operating than it is to replace it with JEDMICS. He concluded that at the latest all JEDMICS sites will be up and operational by 2nd Qtr FY 97**. ACTION: He and Ms. Renata Price, AMCRDA-T, want to be outbriefed on the performance specification and JEDMICS status at the end of the meeting where the review of performance specification is takes place (target no later than 15 Feb 97)**

Mr. Ney closed the meeting upon Mr. Adam's departure.

Action items from this meeting:

ITEM DESCRIPTION	RESPONSIBLE INDIVIDUAL	COMPLETION DATE
Identify Depot representatives and give the names to Mr. Ney, so that they can be included on the distribution list for the next meeting.	Marlin Newman, HQ IOC	1 Oct 97
Make sure that the user community is solicited for input and, if a person who should participate in the meeting is identified, furnish their name to Mr. Ney so that they can be invited to the meeting.	Principal task force members	1 Oct 97
Provide whatever information he can find on workflow management functional requirements to Mr. Ney so that he can distribute them to task force members.	Lou Conter, HQ AMC	Done
Locate commercial PDM system specifications that could be used as input into the ACMS specification.	Task Force Members	15 Oct 97
Investigate the Vault, Processes, Simple, and Complex Links Integration and User Interface (VPSCii) description of PDM as part of the effort to develop a draft ACM process model. (Link to VPSCii Guide is on the ACMS web page).	IEA and BDM	30 Aug 97
Pursue getting copies of requirements documents used by Crusader.	Tom Schneider, IEA	15 Sep 97
Provide a copy of the Land Information Warfare Activity's web security requirements to Gordon Ney for distribution to EDMS FCG.	Paul Behrens, EDMS PMO	
Request nominations from the FCG and charter a working group to develop TDP packaging standards for use in web-based acquisition.	Gordon Ney, IEA	15 Sep 97
Draft an ACMS process model, prepare a list of commercially available PDM capabilities, and send them to the MSCs for their review prior to the	BDM	TBD

ITEM DESCRIPTION	RESPONSIBLE INDIVIDUAL	COMPLETION DATE
ACMS Envisioning Meeting.		
Reevaluate timeline and dates for envisioning meeting in light of guidance from this status review meeting	IEA and BDM	TBD
Mr. Adams offered to investigate why the Joint Logistics System Center (JLSC) money programmed for the Configuration Management Information System (CMIS)and Procurement Data Support System (PDSS) and returned to the Army was not allocated to acquiring ACMS	Mr. Adams, AMC	
Address the problem with copying platters for Continuity of Operations (COOP)	John Montgomery, EDMS PMO	20 Oct 97
Develop more awareness of PDM functions and capabilities by attending conferences like Kalthoff (see ACMS web page for link to Kalthoff and CIMdata)	EDMS FCG members	29 Sep –2 Oct 97 on-going
Mr. Adams indicated he wanted to be kept informed of the progress of the ACMS Task Force and he suggested that at the next ACMS task force meeting that the status of the JEDMICS implementation effort be revisited	Gordon Ney, IEA	31 Oct 97
Mr. Adams and Ms. Renata Price, AMCRDA-T, want to be outbriefed on the performance specification and JEDMICS status at the end of the meeting where the review of performance specification is takes.	Gordon Ney, IEA	15 Feb 98

Date, Time, Location and Purpose of Next ACMS Task Force Meeting

Tentative DATE: 20-24 Oct 97

Tentative TIME: Start at 0800 on 20 Oct, end at 1200 on 24 Oct

Tentative LOCATION: TACOM, WARREN, MI

PURPOSEOF MEETING: Establish scope, capabilities, interactions, and constraints of ACMS

Appendix A
Attendance List

ACMS TASK FORCE STATUS MEETING AT CECOM
Attendance List
13 & 14 AUG 97

NAME	ORGANIZATION	PH-COM/DSN	E-MAIL
Chris Catotti	STRICOM AMCTI-EO	407-384-3913/970-3913	catottic@stricom.army.mil
Gordon Ney	IEA	309-782-6586/793-6586	gney@ria-ehm2.army.mil
Tom Schneider	IEA	309-782-7794/793-7794	tschne@ria-ehm2.army.mil
Jim Cox	BDM	703-848-6739	jcox@bdm.com
Alberto Craff	TACOM-ACALA	309-782-4115/793-4115	acraff@ria-emh2.army.mil
Willie Campbell	LAISO, AMCOM	205-955-7184/645-7184	campbell-we@redstone.army.mil
Patricia Martinez	TACOM-WARREN	810-574-6067/786-6067	martinez@cc.tacom.army.mil
Henry Younger	EDMS PM, AMSAM	205-876-8251/746-8251	hyounger@redstome.army.mil
John Montgomery	EDMS PMO	205-876-9842/746-9842	monty@redstone.army.mil
Carla Crawford	RDEC AMCOM	205-842-9821/788-9821	carlac@repos.redstone.army.mil
Gayle Booker	EDMS PMO	205-842-8277/788-8277	gayles@redstone.army.mil
Carol Sitroon	TACOM-ARDEC	201-724-6546/880-6647	csitroon@pica.army.mil
Rick Uldrich	CECOM	908-532-3744/992-3744	uldrich@doim6.monmouth.army.mil
Wil Ensenat	IOC	309-782-5175/793-5175	wensenat@ria-emh2.army.mil
Gary Salomon	CECOM, EDM	732-532-2224/992-2224	salomon@doim6.monmouth.army.mil
Ann Minniti	CECOM, EDM	732-532-3645/992-3645	minnitl@doim6.monmouth.army.mil
Steve Zukowski	CECOM, EDM	732-532-2358/992-2358	zukowski@doim6.monmouth.army.mil
Lou Conter	HQ AMC CALS	703-617-7775/767-7775	lconter@hqamc.army.mil
Ginny Proulx	HQ CECOM, DCI	732-532-5664/992-5664	proulxv@doim6.monmouth.army.mil
John Bender	RIA	309-782-6946/793-6496	jbender@ria-emh2.army.mil
Elaine Seville	HQ AMC	703-617-9830/767-9830	eseville@hqamc.army.mil
James Kachmarsky*	Toby Army Depot	717-895-6487/795-6487	jkachmar@tobyhanna-emh3.army.mil
Steve McGlone	IEA	309-782-6521/793-6521	smcglo@ria-emh2.army.mil
Ed Dorchak	BDM	703-848-5740	edorchak@bdm.com
Sandra Medor	TACOM, ARDEC	201-724-6538/880-6538	smedor@pica.army.mil
Clana Randall	LAISO/AMCOM	205-955-7171/645-1717	crandall@redstone.army.mil
Cathy Bickley	AMCMEA/JEDMICS	205-876-1158/746-1158	cbickley@redstone.army.mil
Len Goldsmith+	TACOM, ARDEC	973-724-4040/880-4040	goldsmith @pica.army.mil
Dale Adams+	AMC		
Jim Barbarello+	CECOM		

* Attended on 13 August only

+ Attended on 14 August only

Appendix B
Briefings Presented at the Status Meeting

ACMS Task Force Meeting

CECOM

13 - 14 August 97

Meeting Purpose

- Present what has transpired since the last meeting
- Determine how we will proceed from here
- Hear about some related efforts
- Discuss the status of JEDMICS Implementation

Agenda - Morning 13 August

Time	Topic	Speaker
8:00 AM	Welcome & Introduction	G. Ney
8:15 AM	Background on ACMS	G. Ney
9:00 AM	ACMS Performance Specification Approach & Timeline	J. Cox
10:00 AM	*Break*	
10:30 AM	ACMS Boundaries -- Functional, User Community, External System Interfaces	J. Cox
11:45 AM	*Lunch*	

Agenda - Afternoon 13 August

Time	Topic	Speaker
1:00 PM	Crusader Program CITIS GM C4 Program	EDS
2:30 PM	CBDCOM PDM Status Briefing	G. Ney
3:00 PM	*Break*	
3:30 PM	CMStat Evaluation Results	G. Booker
4:00 PM	Automated Document Conversion System	P. Behrens
4:30 PM	Web Based Acquisition	P. Behrens
5:00 PM	*End of Day 1*	

Agenda - Morning 14 August

Time	Topic	Speaker
8:00 AM	CECOM PDM Demonstration	G. Salomon
9:30 AM	MSC Envisioning Meeting -- Description	E. Dorchak
10:15 AM	*Break*	
10:45 PM	Envisioning Meeting Data Call Discussion	E. Dorchak
11:30 AM	Preliminary Implementation Strategy	G. Booker
12:00 PM	*Lunch*	

Agenda - Afternoon 14 August

Time	Topic	Speaker
1:00 PM	**ACMS Rap Up**	G. Ney
1:45 PM	*Break*	
2:15 PM	Review Status of JEDMICS Implementation	J. Knowles
4:30 PM	*End of Meeting*	

Background on ACMS

Gordon Ney

Presentation Outline

- ✔Current Engineering Data Environment
- ✔Goals of Acquisition Reform
- ✔How do we achieve those goals?
- ✔What is PDM?
- ✔PDM Functions
- ✔PDM Benefits
- ✔ACMS Key Events

Current Engineering Data Environment

- ✔ Army data primarily stored in raster format
- ✔ Contractors are submitting tech data in more “intelligent” data formats
- ✔ TD/CMS can’t manage “intelligent” data
- ✔ Forces new producers to “reinvent” lost data intelligence
  - metadata
  - geometry

Goals of Acquisition Reform

- ✔Use contractor systems and data formats as much as possible
- ✔Government won’t own as much data
- ✔Government must have access (insight) to contractor data
- ✔Increase Government productivity

How do we achieve those goals?

Product Data Management (PDM)!

What is PDM?

A tool that manages all product-related information - including electronic documents, digital files, and database records.

PDM keeps track of all the data required to design, test, manufacture, support and maintain products.

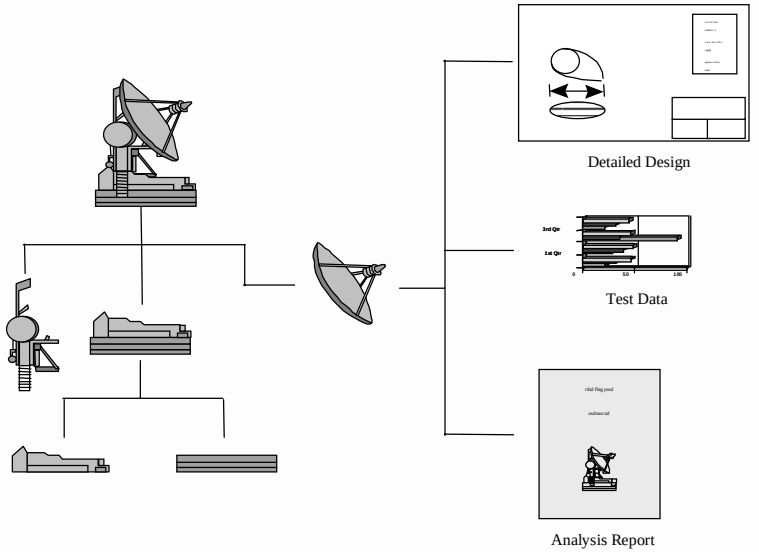
PDM systems are client/server based applications that are moving very rapidly toward web based clients capable of at least find, view, print.

PDM Functions

- ✔Product Structure/Bill of Materials
- ✔Configuration Management
- ✔Work/Process Flow Management
- ✔Vaulting
- ✔Program Management
- ✔Imaging Services
- ✔Parts Classification

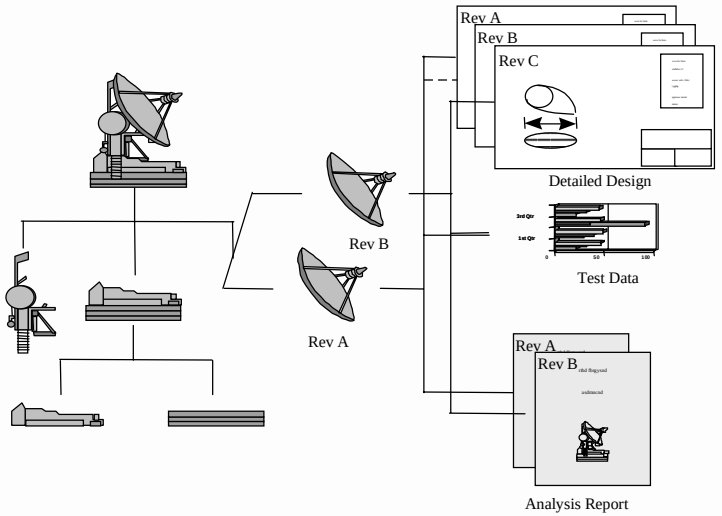
Product Structure

A Product Structure is a hierarchical listing of the assemblies, subassemblies, and parts that comprise a product. A PDM system allows the relevant CAD models, drawings, and documents to be attached to the Product Structure at the appropriate assembly or part.



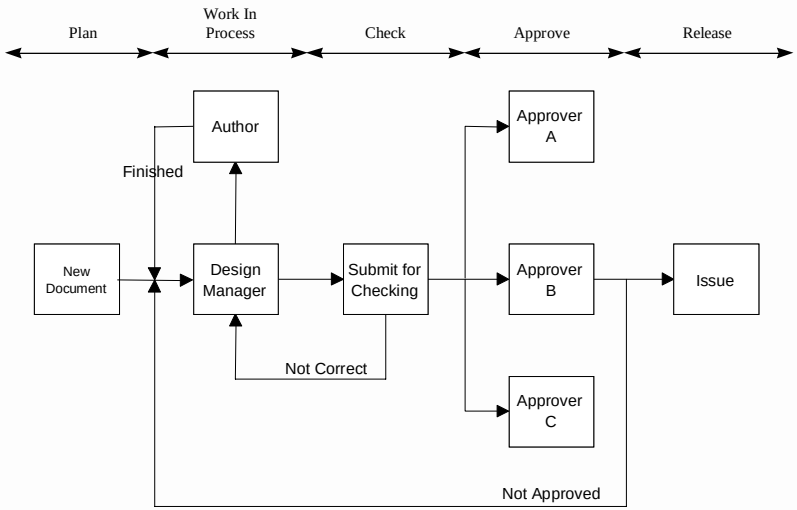
Configuration Management

Controls access to product data to assure only released data is available. Maintains version control and history. Provides a series of electronic forms and functions for change requests, change assessments and change summaries. These forms, along with attachments, are routed through the evaluation and approval process.



Work/Process Flow Management

Repetitive business processes can be programmed within the PDM system to automatically move information between process steps. Process cycle time and work status can be monitored and reports generated.

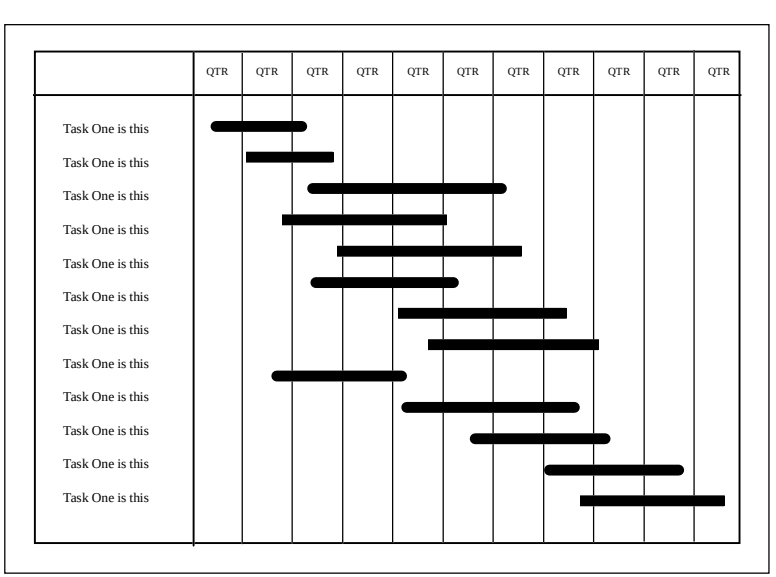


Vaulting

The vault contains either the product data itself or information that points to the actual data. Can store multiple data formats. Can access data in multiple vaults (repositories). Controls access through check-in, check-out procedures

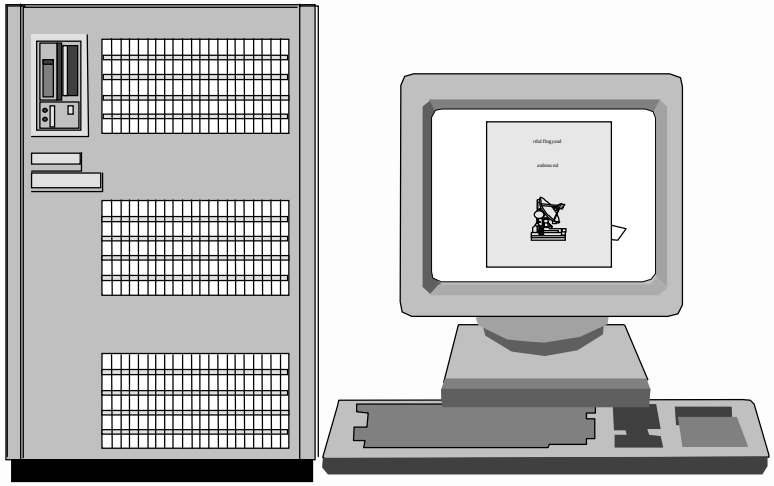
Program Management

When integrated with a third-party project management system it allows for tracking of actual resources and tasks against planned events. Completion of each task and its associated data creation is reported throughout.



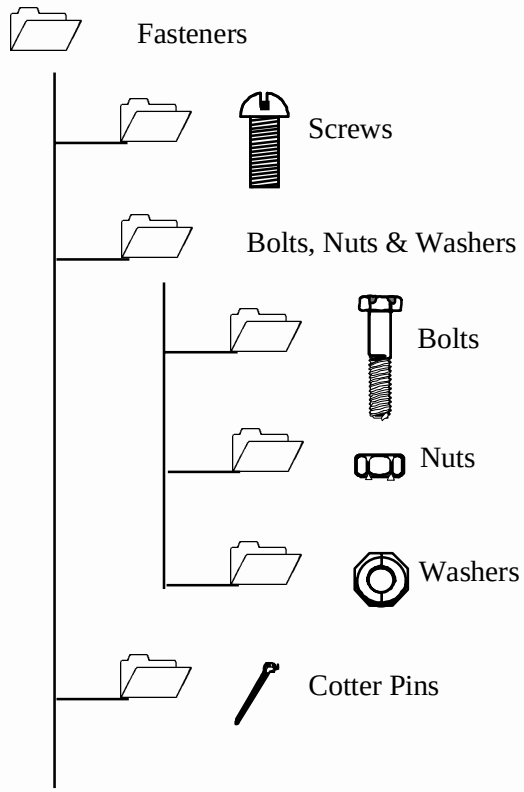
Imaging Services

Provides on-line access to multiple data formats and representations (raster, vector, video, text, etc) through standard viewer tools. Allows for review, print, and mark-up capability.



Parts Classification

Allows similar or standard parts, processes, and other design information to be grouped by common attributes and retrieved for re-use. Parts libraries can be established and used by designers or logisticians.



PDM Benefits

Reduces:

- ✔ Design time
- ✔ Design change time
- ✔ Document delivery time
- ✔ Production costs
- ✔ Design errors

Improves:

- ✔ Data access
- ✔ Data and process quality
- ✔ Business process efficiency
- ✔ Integrated Product Development methods
- ✔ Configuration Control
- ✔ Communications

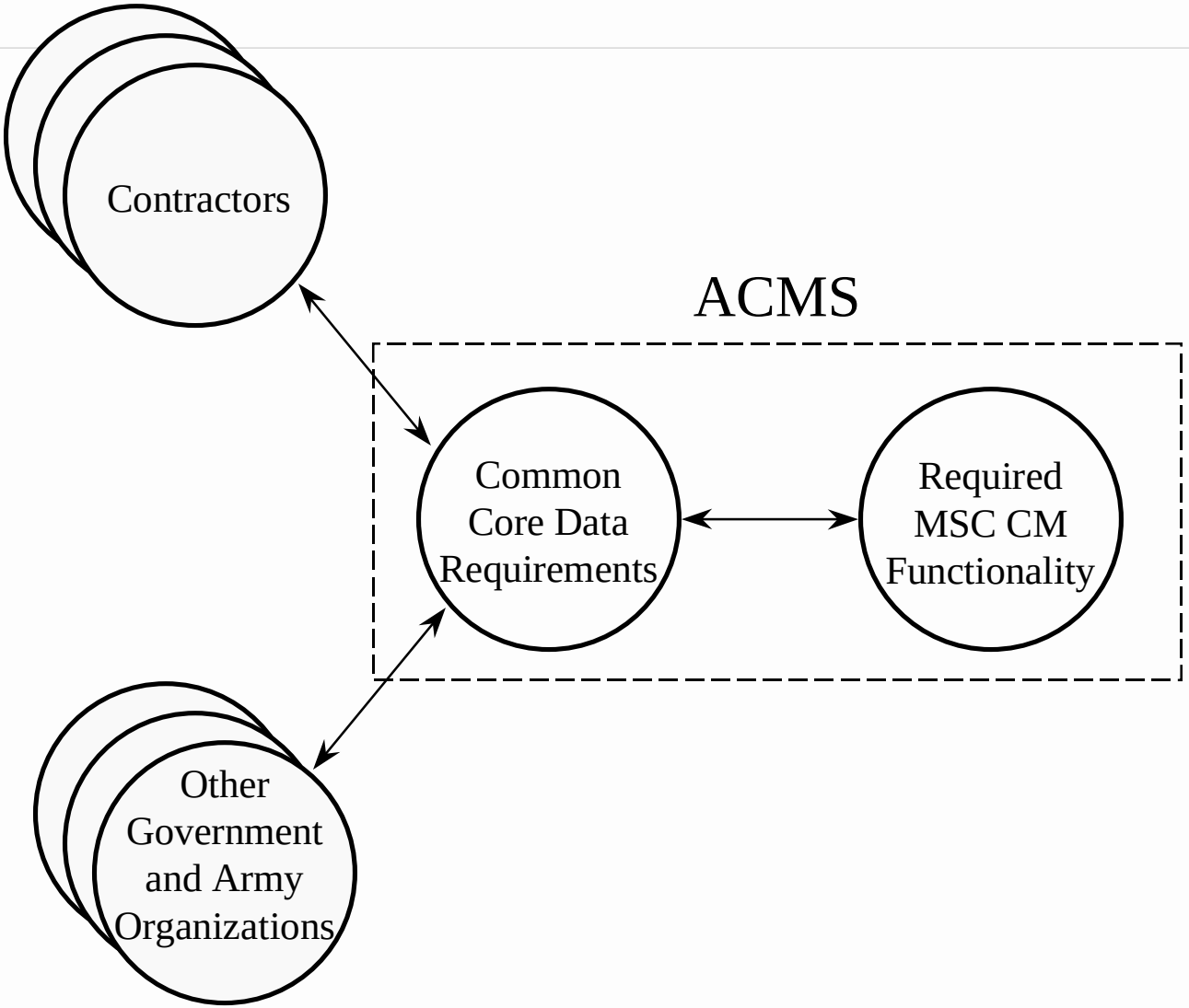
ACMS Key Events

Event	Planned	Actual
IEA submit Plan of Action for approval	Feb 97	31 Jan 97
CG AMC approve IEA Plan of Action	Feb 97	12 Feb 97
Hold project kick-off meeting at CBDCOM	Mar 97	13 Mar 97
IPR with Director of AMSAA		14 Mar 97
IPR with HQ AMC, DCSRDA (MG Beauchamp)	Mar 97	21 Mar 97
Submit revised Plan of Action		27 Mar 97
Attend PDM Conference in Los Angeles		23-25 Apr 97
DCSRDA approval of revised Plan of Action		7 May 97
MG Beauchamp letter soliciting MSC support		23 May 97
Award of support contract to BDM	Jun 97	17 Jun 97

ACMS Vision

ACMS will provide the required data when it is needed and in a form that the user can apply to accomplish the mission. The required data consists of all the engineering data necessary to completely define an item for the intended purposes of specifying, designing, analyzing, manufacturing, maintaining, sustaining, testing, inspecting, and dispositioning that item over its entire life span. The ACMS must also operate in a diverse Army environment, integrate with other MSC business processes, and communicate with other MSC, government and industry information management systems.

ACMS Concept of Operations



ACMS Key Events

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IEA submit Plan of Action for approval	Feb 97	31 Jan 97
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Award of support contract to BDM	Jun 97	17 Jun 97

Approved Changes to Plan of Action

- ✔Develop performance specification only
- ✔Expand scope to include Tech Loop
- ✔Do it quicker
- ✔Send out letter to MSCs to solicit support.

ACMS Key Events

Event	Planned	Actual
IEA submit Plan of Action for approval	Feb 97	31 Jan 97
CG AMC approve IEA Plan of Action	Feb 97	12 Feb 97
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Guiding Principles

- ✔Maximizing the use of prior work
  - TD/CMS Functional Description
  - CMIS & CLM Process Models
  - CMStat and CMIS Test Plans
  - PDSS Process Models
  - MIL STD 2549
- ✔Capturing Requirements in a database for easier tracking, sorting and dispositioning

Guiding Principles

- ✔Using a PDM consulting firm such as CIMdata or D. H. Brown and Associates to advise the Task Force
  - factors that need to be considered in preparing the performance specification
  - PDM industry perspective of the draft performance specification
- ✔Using the Web to keep Task Force members informed

ACMS Performance Specification Approach and Timeline

Prepared for the

ACMS Task Force Status Meeting

13 August 1997

Jim Cox
BDM Federal
703/848-6739
jcox@bdm.com

Briefing Topics

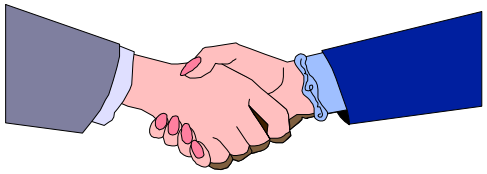
- Project Objective
- Government/BDM Partnership
- Approach
- Requirements Development and Dispositioning
- Schedule

Project Objective

- **General Objective**: Assist ACMS Task Force in developing the ACMS Performance Specification.
- **Specific Objectives**:
  - Facilitate ACMS Task Force in articulating ACMS vision in terms of processes supported and system capabilities required.
  - Gather and analyze existing Army configuration management, Tech Loop, and repository requirements data.
  - Formulate ACMS performance requirements from data collected.
  - Write and deliver ACMS Performance Specification.
  - Acquire product survey information on existing PDM vendors and products.

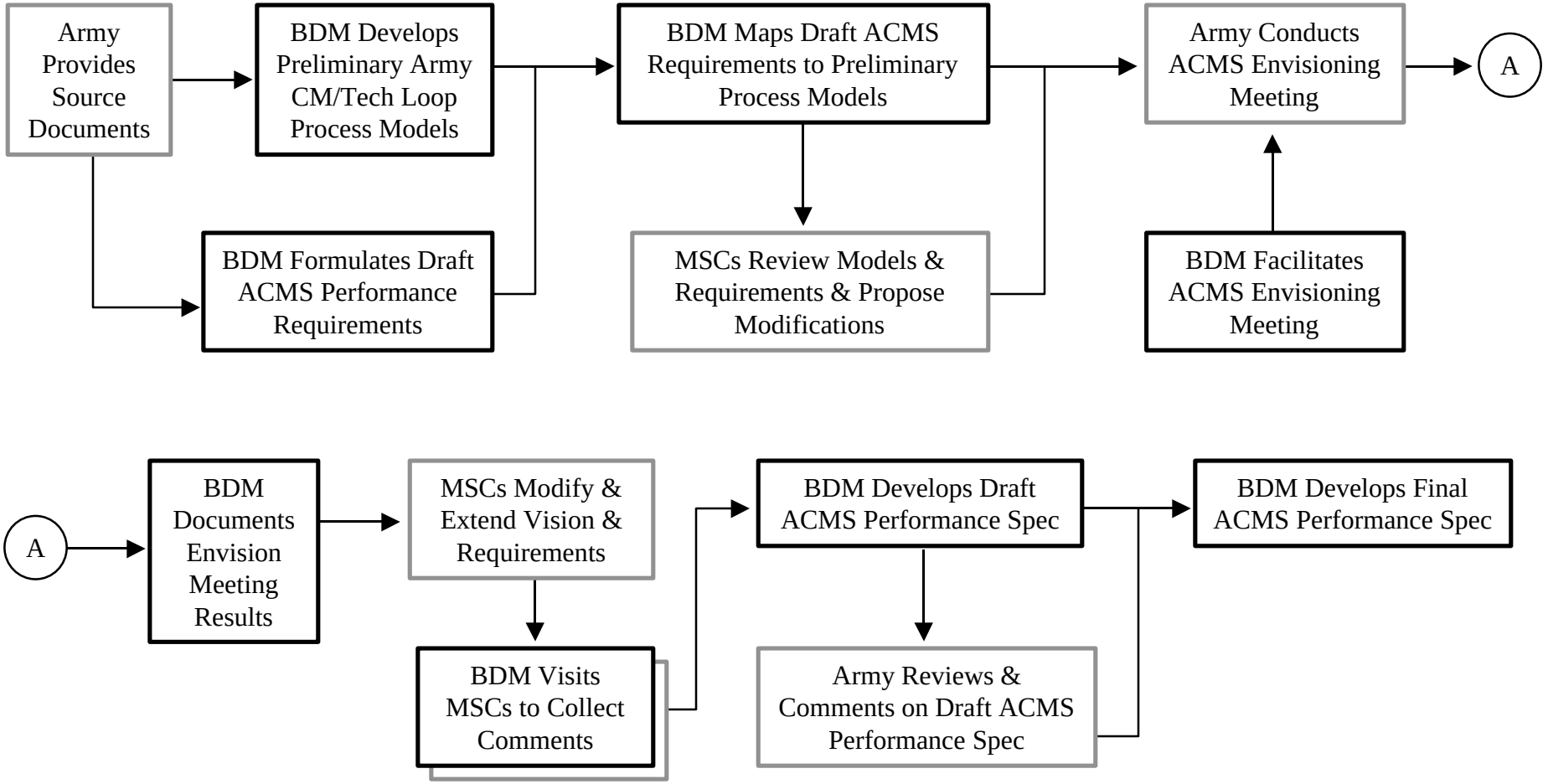
Government/BDM Partnership

- **Government**:
  - Provide vision, ideas, and source data.
  - Review, modify, and augment process models and requirements.
  - Review and comment on ACMS Performance Spec.

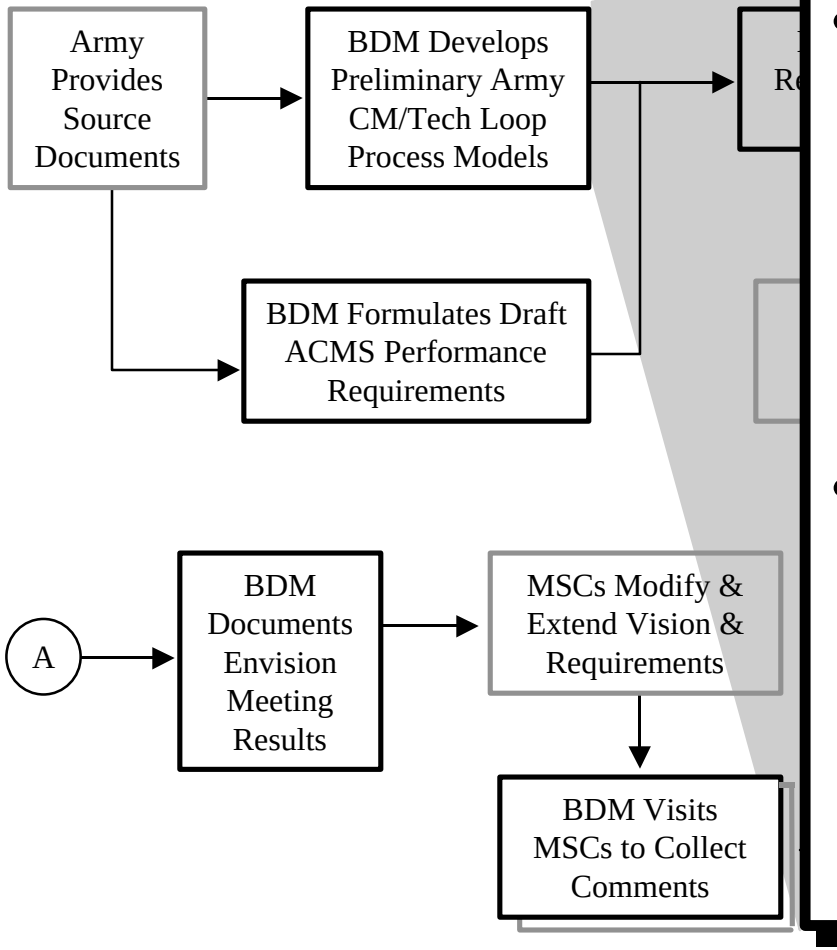


- **BDM**:
  - Collect and analyze source data.
  - Facilitate envisioning meeting.
  - Translate data and vision into performance requirements.
  - Classify and organize requirements.
  - Write ACMS Performance Specification.
  - Acquire product survey data.

Approach

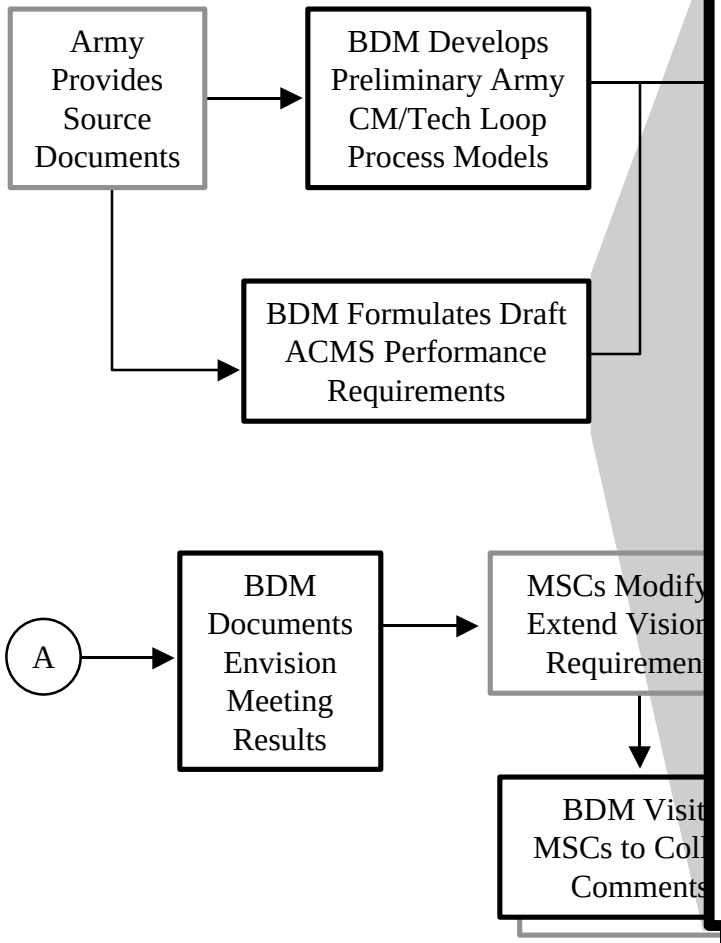

Army Provides Source Documents
BDM Develops Preliminary Army CM/Tech Loop Process Models
BDM Maps Draft ACMS Requirements to Preliminary Process Models
Army Conducts ACMS Envisioning Meeting
A
BDM Formulates Draft ACMS Performance Requirements
MSCs Review Models & Requirements & Propose Modifications
BDM Facilitates ACMS Envisioning Meeting
A
BDM Documents Envision Meeting Results
MSCs Modify & Extend Vision & Requirements
BDM Develops Draft ACMS Performance Spec
BDM Develops Final ACMS Performance Spec
BDM Visits MSCs to Collect Comments
Army Reviews & Comments on Draft ACMS Performance Spec

Preliminary Army CM & Tech Loop Process Models



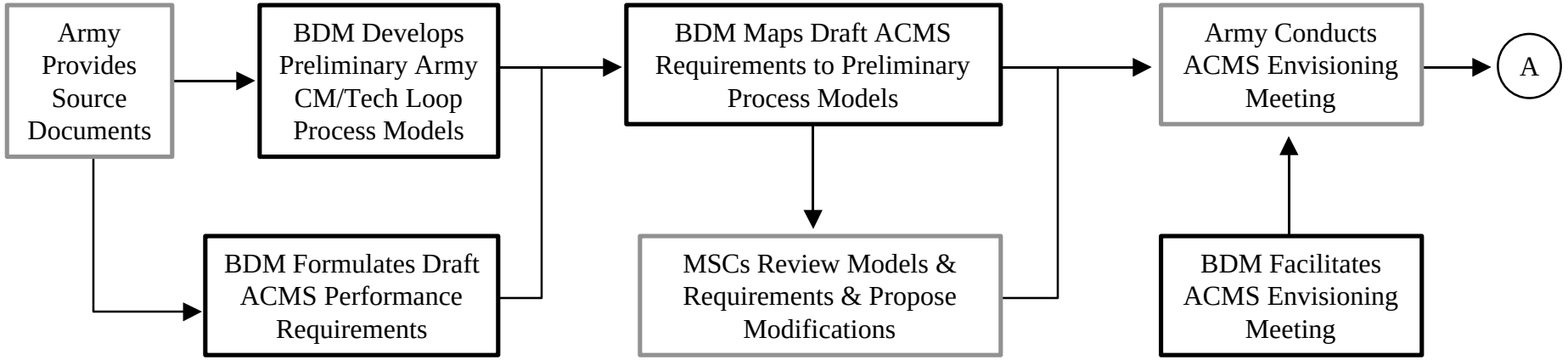
- BDM to develop a preliminary indentured list of Configuration Management and Tech Loop functional activities.
- Preliminary list to be based on the following:
  - CMIS & CLM Process Models
  - FCIM Tech Loop Models
  - PDSS Process Model

Draft ACMS Performance Requirements



- Start with the following:
  - CMIS SRS
  - PDSS SRS/Process Model
- Augment with the following:
  - TD/CMS FD & Supplement
  - Army CMIS Test Plan/Procedures
  - Army CMIS PRs & SCRs
  - CCSSOI

MSC Review of Preliminary Models and Requirements



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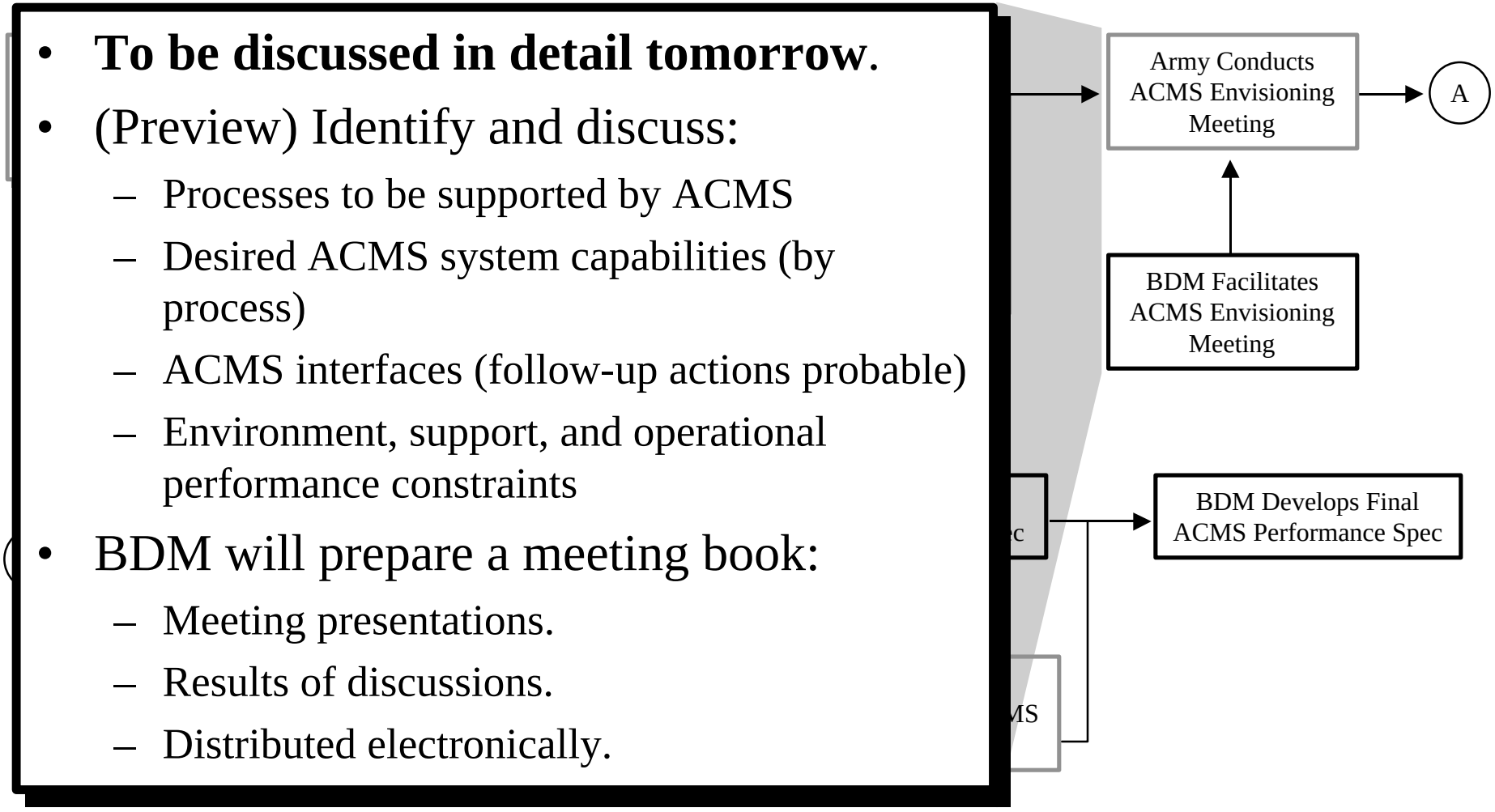
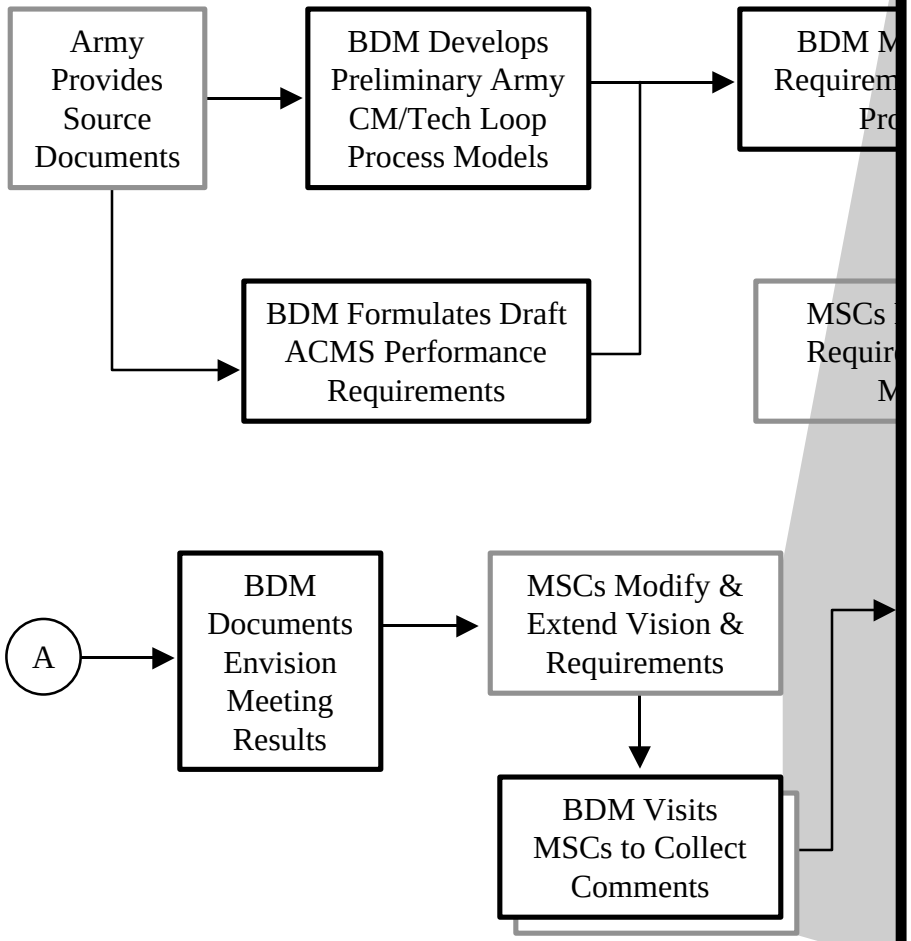
- Review indentured list of functional activities with candidate ACMS system capability requirements mapped to activities.
- Add, delete, and modify activities and candidate ACMS capabilities.
- Prepare for discussion at ACMS Envisioning Meeting.

ACMS Envisioning Meeting

- **To be discussed in detail tomorrow**.
- (Preview) Identify and discuss:
  - Processes to be supported by ACMS
  - Desired ACMS system capabilities (by process)
  - ACMS interfaces (follow-up actions probable)
  - Environment, support, and operational performance constraints
- BDM will prepare a meeting book:
  - Meeting presentations.
  - Results of discussions.
  - Distributed electronically.

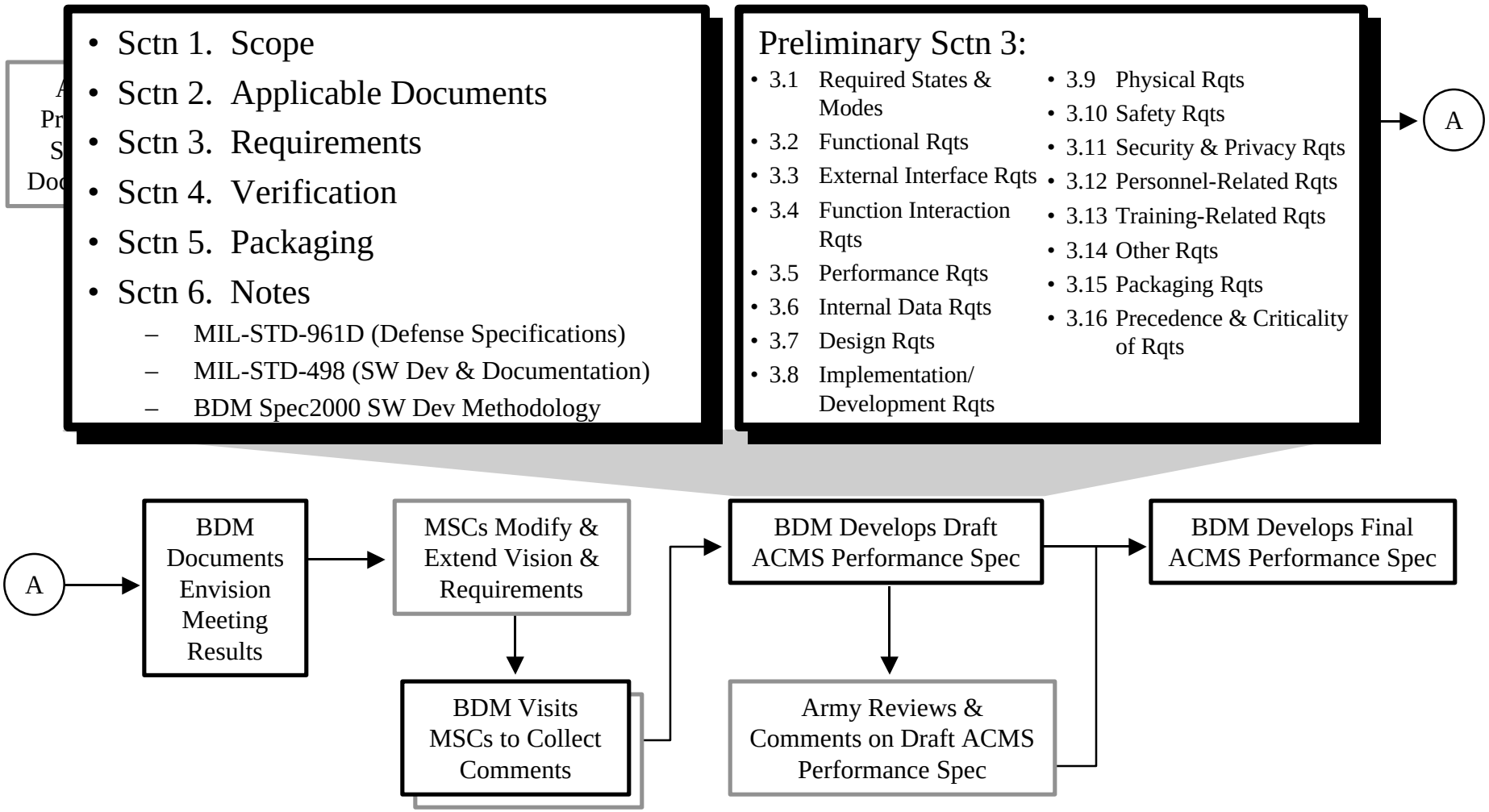


MSC Modification of Vision and Requirements



- Review results of ACMS Envisioning Meeting.
- Propose additions, modifications, and deletions to process model and required ACMS capabilities.
- Complete interface action items.
- Meet and discuss changes with BDM.

Draft ACMS Performance Spec



Requirements Development and Dispositioning Topics

- ACMS Requirements Metadata
- Status
- Allocation
- Category
- Traceability
- ACMS Requirements Development Process
- ACMS Requirements Dispositioning Strategy

ACMS Requirements Metadata

Identification & Specification

- Requirement Identifier
- Entry Date
- Update Date
- Requirement Text
- Comment Text
- Origin
- Paragraph/ID

Classification

- Status
- Allocation (evolution)
- Category
- Verification Method

Traceability

- Parent Requirement(s)
- Allocated Requirement(s)

Classification Data: Status

- Describes the disposition status of the requirement.

Domain Value	Value Definition
Modified	Requirement is a modification or derivation of another requirement. It is under development or review and is not yet considered acceptable for delivery.
Accepted	Requirement was provided by or accepted by the Army. Source Shalls and Text will be initially designated as Accepted.
Proposed	Requirement was developed by BDM based on a Government source or Army comments. It is to be included in a delivery of the Performance Spec.
Challenged	Previously accepted requirement's suitability for inclusion in the ACMS PS is questioned by BDM.
Deleted	Previously accepted requirement has been rejected by the Army as an ACMS requirement.

Classification Data: Allocation (1 of 2)

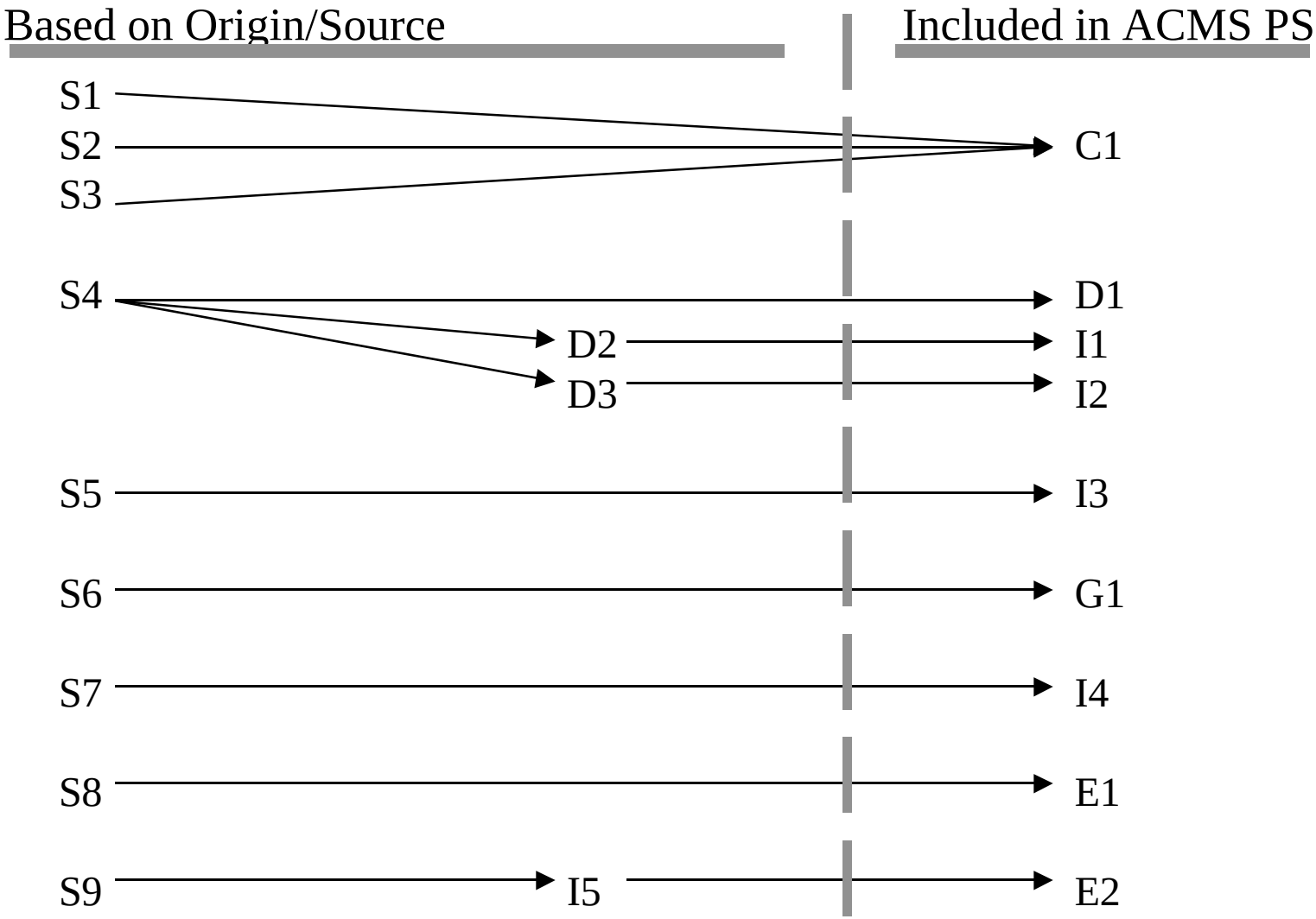
- Characterizes the parent/child relationship between each allocated requirement and its immediate parent.
- In the development of Performance Spec requirements, describes the evolutionary state of a particular requirement.

Domain Value	Value Definition
Process Step (P)	Requirement is a statement of a process step or activity supported by ACMS.
Source (S)	Requirement is a “Source Shall” or “Source Text” which means it comes directly from the Government.
Consolidated (C)	Requirement is developed from a collection of requirements which usually are, but may not be “Source Shalls.” Can be a grouping of duplicate requirements.
Generalized (G)	Requirement is broader than its parent requirement or text. It may include new, relevant information.

Classification Data: Allocation (2 of 2)

Domain Value	Value Definition
Decomposed (D)	Requirement is one specific part of a parent requirement where the parent is broken into more than one piece. This decomposed requirement may include minor rewriting of the parent to add clarity, but may not contain new information or content.
Implied (I)	Requirement is a clarification of the parent requirement or text. New “implied” information or content may be added, but is not mandatory.
Equivalent (E)	Requirement is identical to the parent requirement. It was created strictly for the purposes of assigning the ACMS Performance Spec as the origin and and giving it an ACMS Performance Spec paragraph number.

Requirement Allocation Illustrations



Classification Data: Category (1 of 3)

- Describes the type of requirement. Used to facilitate requirements development, analysis, and dispositioning. ***Note: Domain values shown are preliminary.***

Domain Value	Value Definition
Operating	Requirement defines a required functional capability of the system or states required results of an operation that is performed by the system.
Interface and Interoperability	Requirement identifies or provides a detailed description of a required interface or interfacing mechanism. Can involve specifying particular physical, electrical, data, or API characteristics.
Environmental	Requirement identifies or provides a detailed description of an operating environment constraint. Can include specifying constraints related to computer hardware and software (e.g., existing platforms and operating systems), networking/communications, security, facilities, weather conditions, and shock or vibration conditions.

Classification Data: Category (2 of 3)

Domain Value	Value Definition
Support and Ownership	Requirement defines system availability, maintenance, administration, and operator requirements. Can include operator skill, experience, and training requirements.
Verification	Requirement establishes the measurement parameters, satisfaction criteria, and means by which a performance requirement is verified.

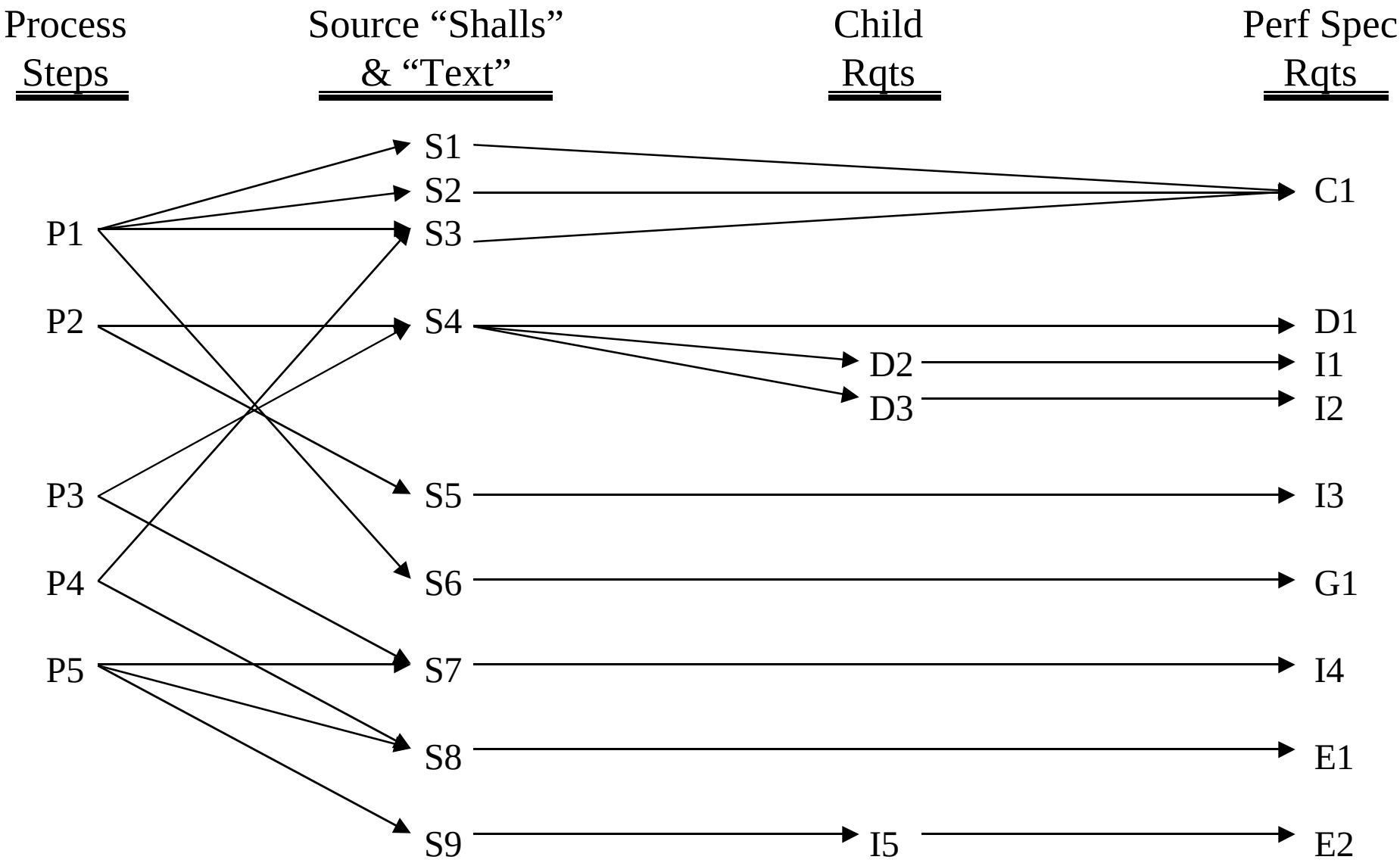
Note: The preceding Domain Values correspond to requirements that are candidates for inclusion in the ACMS Performance Spec.

The subsequent values correspond to requirements, generally "Source Shalls," that are not intended for inclusion.

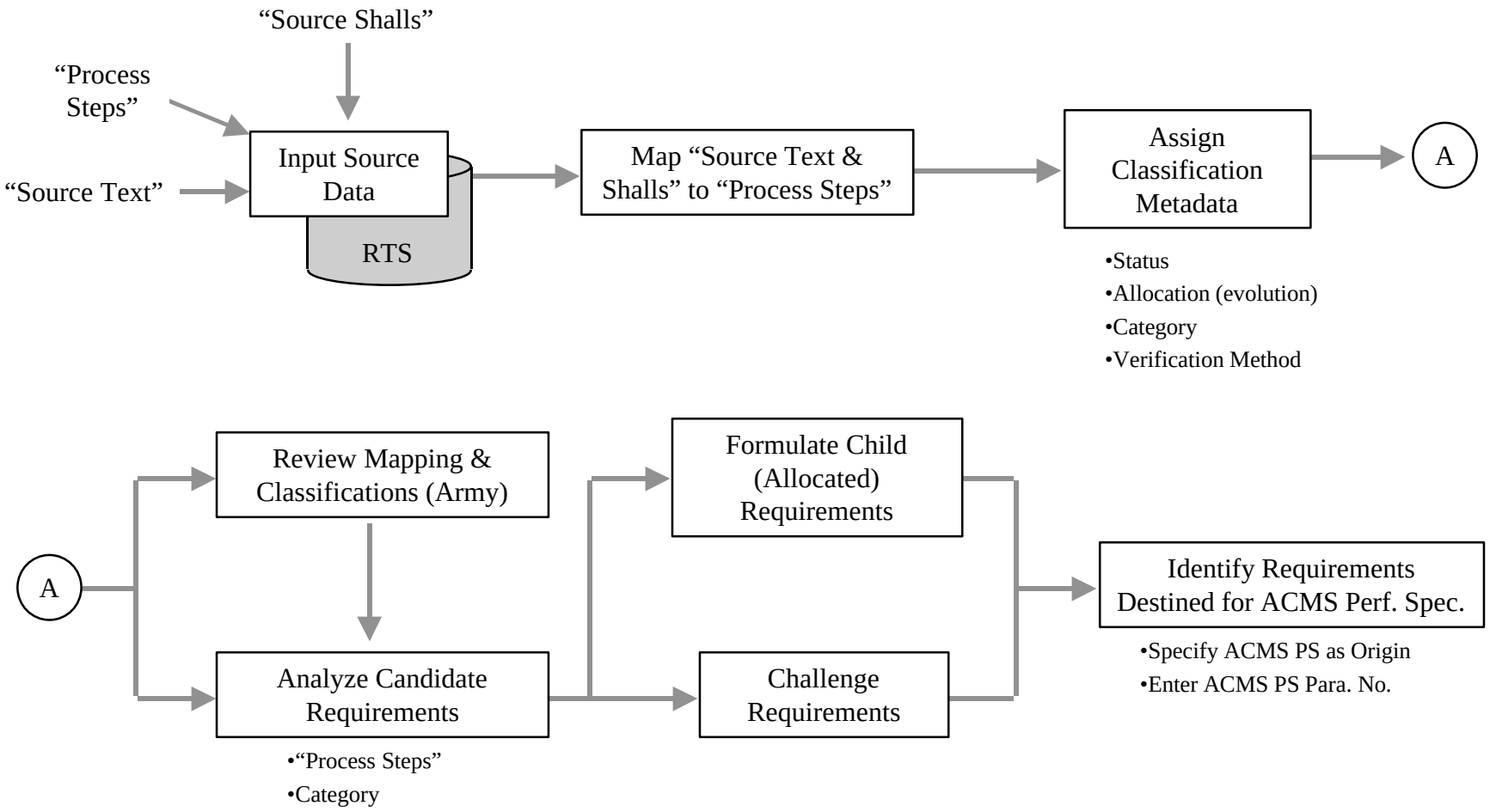
Requirement Category (3 of 3)

Domain Value	Value Definition
Design	Requirement specifies a design or architectural feature of the system. It is not a performance requirement.
Out of Scope	Requirement is outside the agreed upon scope of ACMS.
Test	Requirement is a detailed test requirement that presumes a specific architecture or solution for ACMS.
Acquisition	Requirement specifies the acquisition strategy or establishes an acquisition constraint.
Quality Assurance	Requirement specifies a quality assurance requirement which belongs in the development contract.
Packaging	Requirement specifies a packaging or delivery requirement.

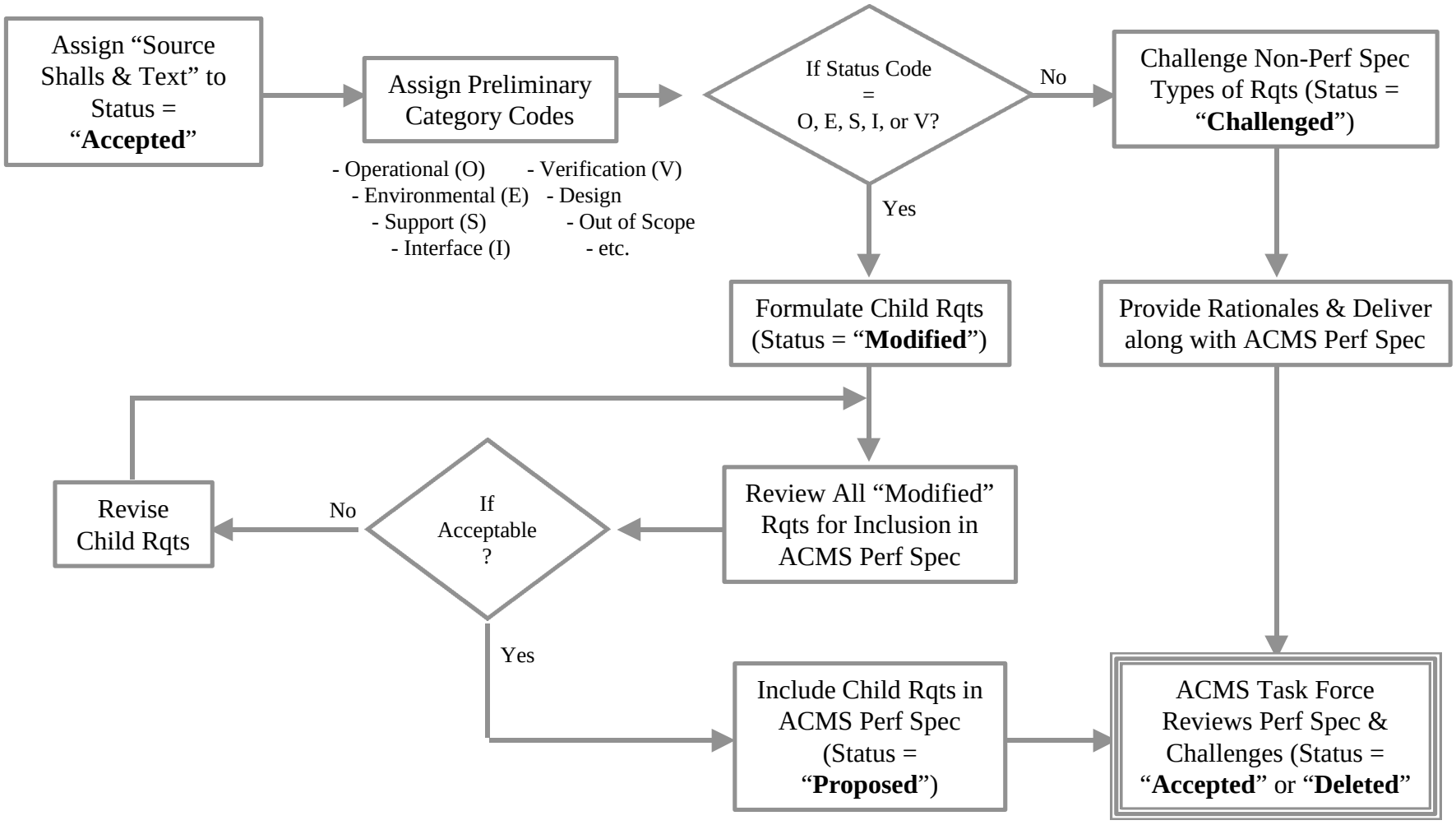
Traceability



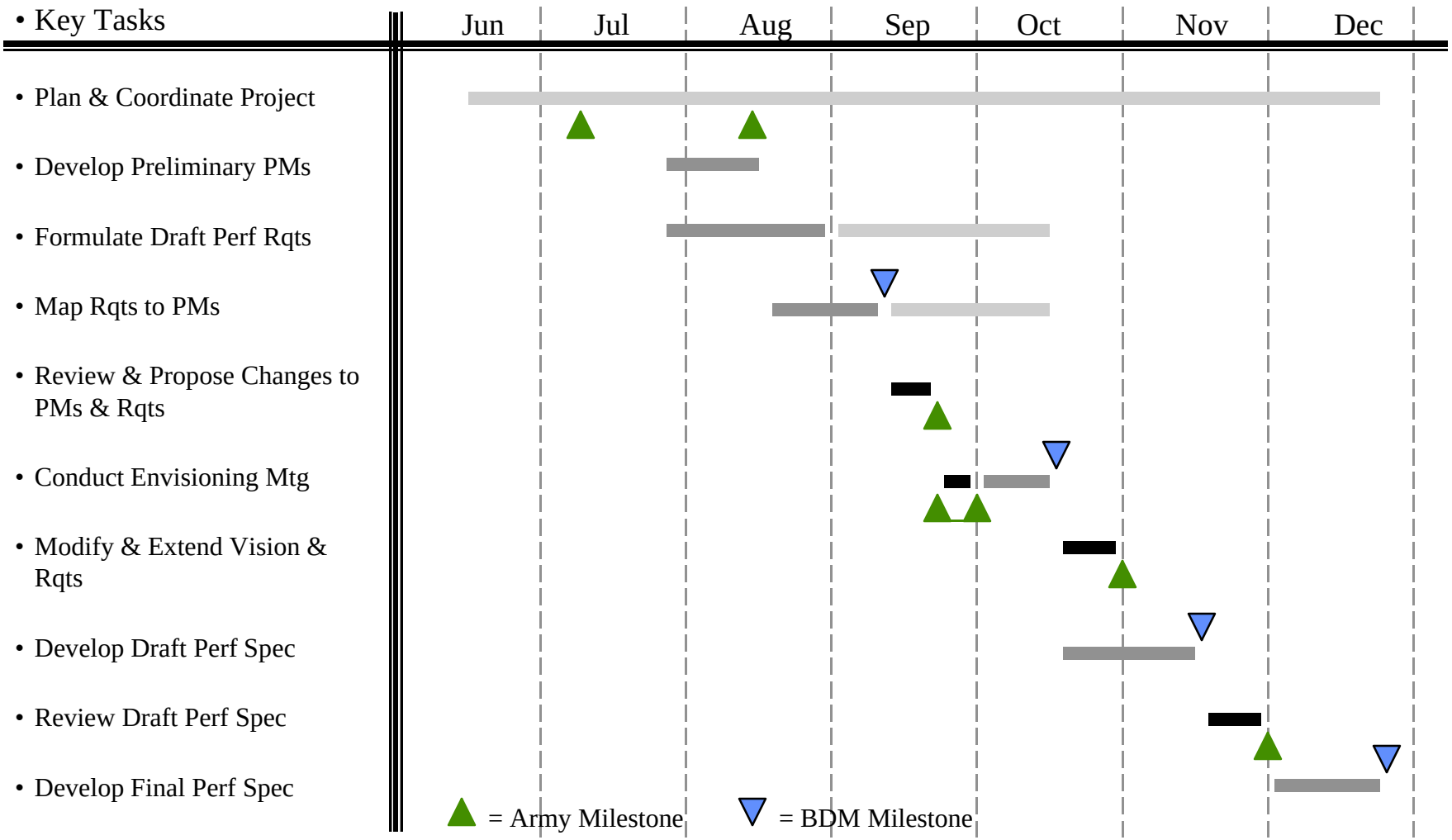
ACMS Requirements Development Process



ACMS Requirements Dispositioning Strategy



Schedule


• Key Tasks
Jun
Jul
Aug
Sep
Oct
Nov
Dec
• Plan & Coordinate Project
• Develop Preliminary PMs
• Formulate Draft Perf Rqts
• Map Rqts to PMs
• Review & Propose Changes to PMs & Rqts
• Conduct Envisioning Mtg
• Modify & Extend Vision & Rqts
• Develop Draft Perf Spec
• Review Draft Perf Spec
• Develop Final Perf Spec
= Army Milestone
= BDM Milestone

ACMS Performance Spec

Process Models

Configuration Management
- Configuration Identification
- Configuration Control
- Configuration Audit
- Configuration Status Accounting

Tech Loop
- Retrieve Tech Data
- Perform Issue Check
- Perform Engineering Analysis
- Update Tech Data

Existing Requirements Documents

- CCSSOI
  - CMIS PRs/SCRs
    - CMIS Tst Proc
- TD/CMS FD
  - PDSS SRS
    - CMIS SRS

MSC Representatives

- •Vision
- •Ideas
- •Processes
- •Requirements
- •Modification
- •Approval

Automated Configuration Management Performance Specification

ACMS Boundaries:

User Communities, Processes, & External Interfaces

Prepared for the
ACMS Task Force Status Meeting
13 August 1997

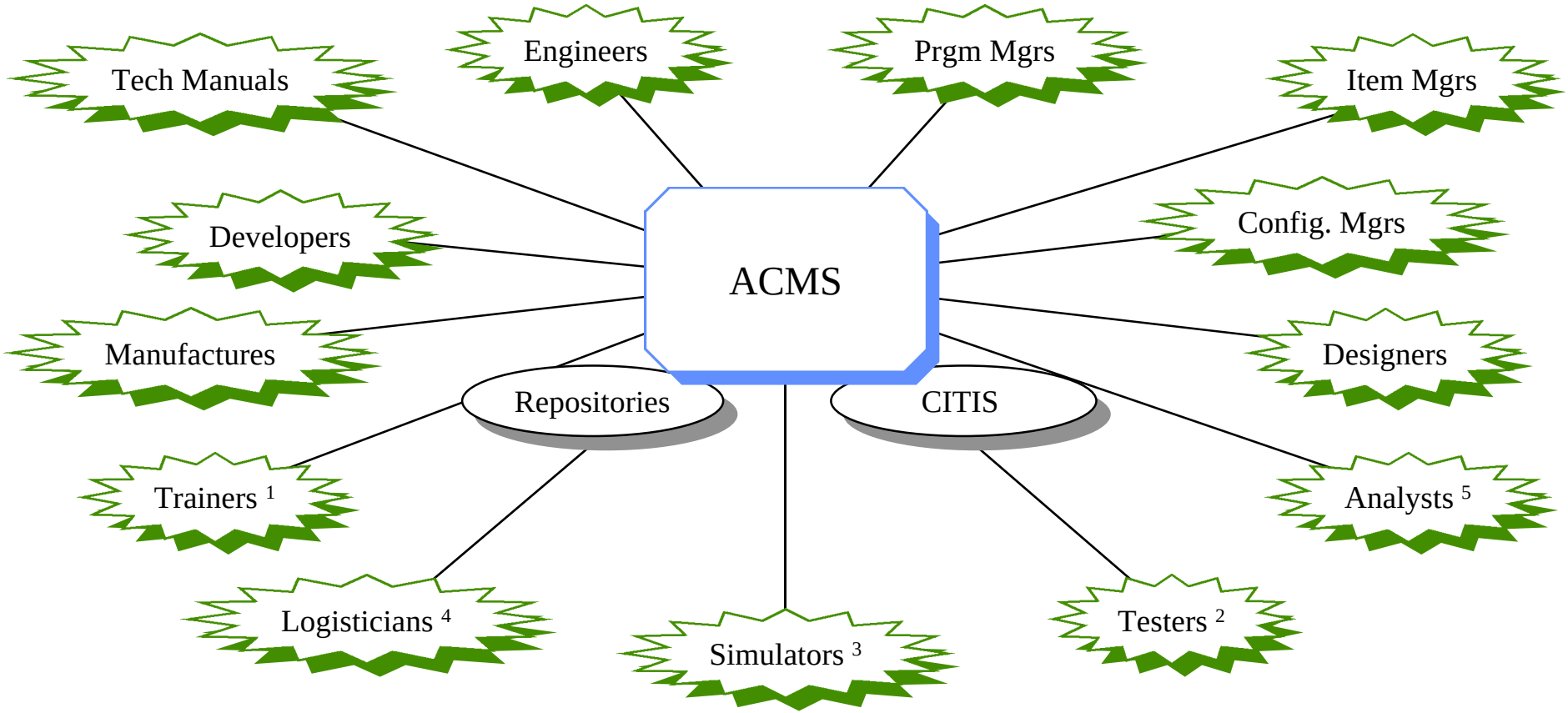
Jim Cox
BDM Federal

703/848-6739
jcox@bdm.com

Briefing Topics

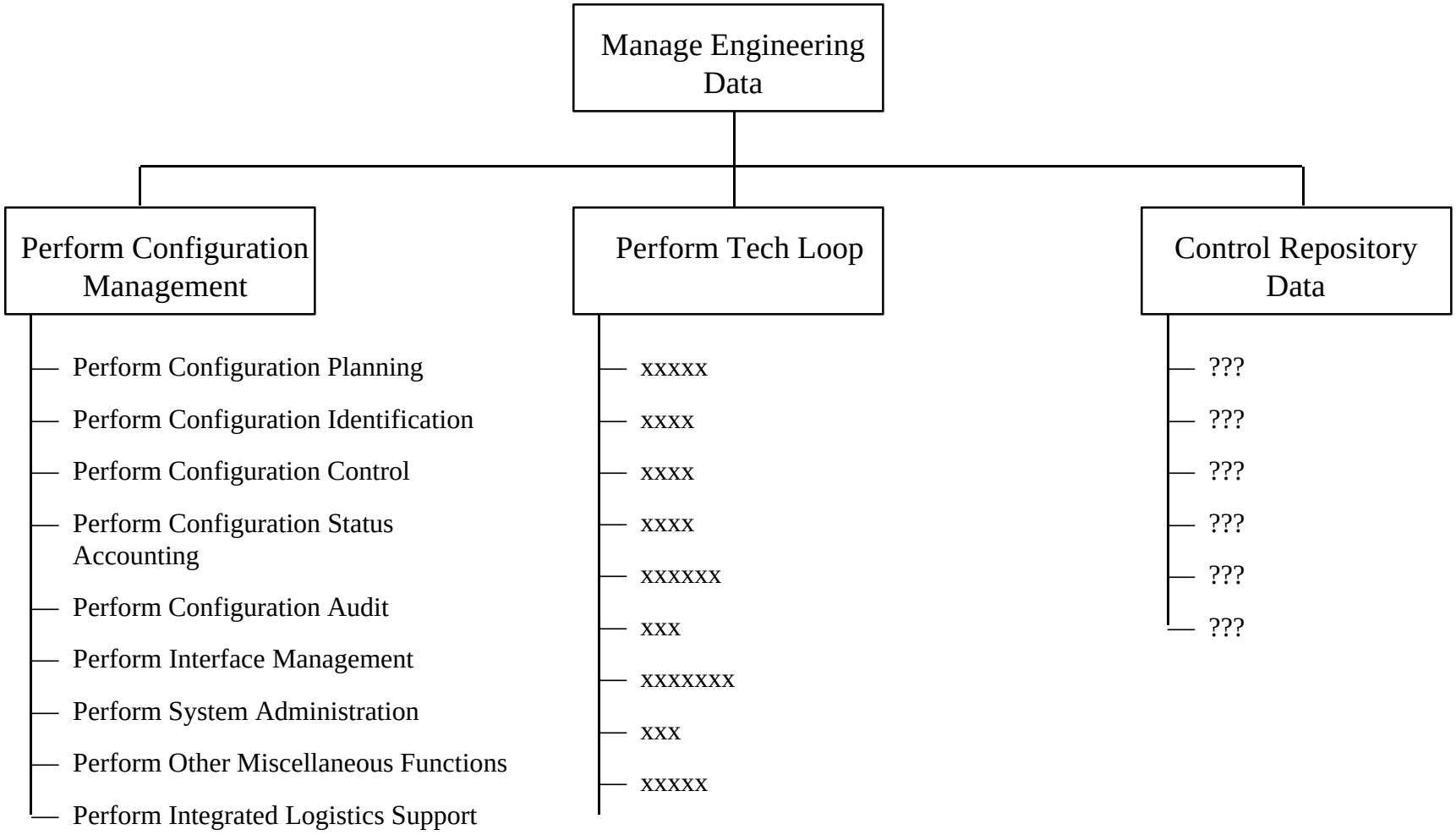
- Candidate ACMS User Communities
- Candidate Processes for ACMS Support
- Strawperson ACMS Business Process Model
- Candidate ACMS Capabilities
- Candidate ACMS External Interfaces

Candidate
ACMS User Communities



1 - Including developers of training devices and simulations.
2 - Developmental & operational testers.
3 - Including developmental & war fighting simulations.
4 - Supporting maintenance, repair, & Total Asset Visibility.
5 - Survivability, industrial base, & operations analysts.

Strawperson
ACMS Process Model



	Draft ACMS Process Model	CMIS SRS PM	CLM CM PM
10000000	**PERFORM CONFIGURATION MANAGEMENT**		**X**
11000000	**PERFORM CONFIGURATION PLANNING**		**X**
11100000	DEVELOP TASKING ACTIVITY CONFIGURATION MANAGEMENT PLAN		**X**
11200000	CONTROL SYSTEM LEVEL INTERFACES		**X**
11300000	GENERATE TASKING ACTIVITY PROCUREMENT PACKAGE INPUT		**X**
12000000	**PERFORM CONFIGURATION IDENTIFICATION**	**X**	**X**
12100000	TRACE CONFIGURATION ITEMS TO WBS		**X**
12200000	PARTICIPATE IN TECHNICAL REVIEWS		**X**
12300000	DEFINE DEVELOPMENTAL CONFIGURATION		**X**
12400000	ESTABLISH/MAINTAIN DOCUMENTATION LIBRARY		**X**
12500000	ESTABLISH/MAINTAIN PROGRAM PARTS SELECTION LIST		**X**
12600000	SELECT AND RECOMMEND CONFIGURATION ITEMS	**X**	**X**
12700000	IDENTIFY DESIGN PART	**X**	
12800000	ESTABLISH CONFIGURATION ITEM BASELINE	**X**	**X**
12900000	ESTABLISH ENGINEERING RELEASE SYSTEM		**X**
12A00000	IDENTIFY PART NUMBER TO DESIGN ITEM	**X**	
12B00000	IDENTIFY VENDORS	**X**	
12C00000	PROCESS WEAPON SYSTEM INFORMATION	**X**	
12D00000	IDENTIFY PLATFORM CONFIGURATIONS FOR T/M/S	**X**	
12E00000	IDENTIFY MISSION REQUIREMENTS FOR Cis	**X**	
12F00000	IDENTIFY LIFE USAGE/MEASUREMENT REQUIREMENTS	**X**	

	Draft ACMS Process Model	CMIS SRS PM	CLM CM PM
13000000	**PERFORM CONFIGURATION CONTROL**	**X**	**X**
13100000	PROCESS ECP	**X**	**X**
13200000	INCORPORATE APPROVED CHANGES VIA DIRECTIVES OR CONTRACT CHANGES		**X**
13300000	IMPLEMENT ECP CHANGES INTO DOCUMENTATION	**X**	**X**
13400000	PROCESS REQUEST FOR DEVIATION (RFD) OR REQUEST FOR WAIVER (RFW)	**X**	**X**
14000000	**PERFORM CONFIGURATION STATUS ACCOUNTING**	**X**	**X**
14100000	ESTABLISH CSA REQUIREMENTS		**X**
14200000	IDENTIFY (CSA) SYSTEMS		**X**
14300000	INPUT INITIAL CI DATA		**X**
14400000	RETAIN AND MAINTAIN DATA		**X**
14500000	IDENTIFY WEAPON SYSTEM	**X**	
14600000	RECORD PLATFORM INFORMATION IN PROGRAM TYPE	**X**	
14700000	IDENTIFY ACTIVITIES MANAGEMENT	**X**	
14800000	ESTABLISH BASELINES	**X**	
14900000	IDENTIFY SERIALIZED ASSETS	**X**	
14A00000	PERFORM MAINTENANCE ACTIONS	**X**	
14B00000	PERFORM TDP VALIDATION	**X**	**X ??**
14C00000	IDENTIFY SHIP DRAWING INDEX	**X**	
14D00000	PROCESS MILITARY SEALIFT COMMAND STANDARD DATA INTERFACE FORMAT	**X**	

	Draft ACMS Process Model	CMIS SRS PM	CLM CM PM
15000000	**PERFORM CONFIGURATION AUDIT**	X	X
15100000	CONDUCT FUNCTIONAL CONFIGURATION AUDIT (FCA)		X
15200000	CONDUCT PHYSICAL CONFIGURATION AUDIT		X
15300000	VIEW CONFIGURATION AUDIT STATUS	X	
15400000	VIEW CONFIGURATION AUDIT RECORDS SUMMARY	X	
15500000	CREATE VALAIDS DATA DISK (FOR PLATFORM OR INSTALLED CI)	X	
15600000	EXPORT VALAIDS CONFIGURATION DATA	X	
15700000	UPDATE/AMEND VALAIDS CONFIGURATION RECORD	X	
15800000	IMPORT POST VALIDATION DATA	X	
15900000	COMPARE POST VALIDATION CONFIGURATION DATA (RIC, SAC, ESWBS, CCF)	X	
15A00000	IDENTIFY VALAIDS REJECTED RECORDS	X	
15B00000	UPDATE APPROVED VALAIDS CONFIGURATION DATA	X	
15C00000	APPEND COMPONENT CHARACTERISTICS FILE	X	
16000000	**PERFORM INTERFACE MANAGEMENT**	X	X
16100000	IMPORT ECPS RFDS RFWS FROM MEARS	X	
16200000	SUPPORT DID-DI-E-1101C INTERFACE	X	
16300000	SUPPORT IHS DODISS INTERFACE	X	
16400000	SUPPORT DSREDS INTERFACE	X	
16500000	SUPPORT ITIMP INTERFACE	X	
16600000	SUPPORT CMIS DATA TRANSFER UTILITY	X	

	Draft ACMS Process Model	CMIS SRS PM	CLM CM PM
17000000	**PERFORM SYSTEM ADMINISTRATION**	**X**	
17100000	PERFORM AD HOC DATABASE QUERIES	**X**	
17200000	MAINTAIN USERS AND GROUP MANAGEMENT INFORMATION	**X**	
17300000	GENERATE SYSTEM MESSG(HELP/ERROR/FAILURE /DEBUG /SUCCESS/ WAIT /DATA)	**X**	
17400000	PERFORM VALIDATION CODE MANAGEMENT	**X**	
17500000	RECORD SITE SPECIFIC AND ALIAS INFORMATION	**X**	
17600000	MAINTAIN IMPORT/EXPORT FILE INFORMATION	**X**	
17700000	PERFORM GLOGAL CHANGES	**X**	
17800000	DISPLAY VALID DATE FORMAT	**X**	
18000000	**PERFORM OTHER MISCELLANEOUS FUNCTIONS (OMF)**	**X**	
18100000	IMPORT MSC DATA	**X**	
18200000	IMPORT AAP TEXT FILE INFORMATION	**X**	
18300000	IMPORT AVAILABILITY INFORMATION FOR PLATFORMS	**X**	
18400000	IMPORT FAILURE DATA BY PLATFORM	**X**	
18500000	IMPORT DEMAND DATA BY PLATFORM	**X**	
18600000	EXPORT MSC DATA	**X**	
18700000	PERFORM MISCELLANEOUS FUNCTIONS	**X**	

	Draft ACMS Process Model	CMIS SRS PM	CLM CM PM
19000000	**PERFORM INTEGRATED LOGISTICS SUPPORT (ILS)**	**X**	
19100000	IDENTIFY PLATFORM INTRODUCTION INFORMATION	**X**	
19200000	PROCESS PROVISIONING TRACKING PROJECTS	**X**	
19300000	TRACK OVERHAUL WORK PACKAGES BY PLATFORM	**X**	
19400000	TRACK SUPPLY READINESS STATUS BY PLATFORM	**X**	
20000000	**PERFORM TECH LOOP**		
30000000	**CONTROL REPOSITORY DATA**		

Candidate ACMS Capabilities

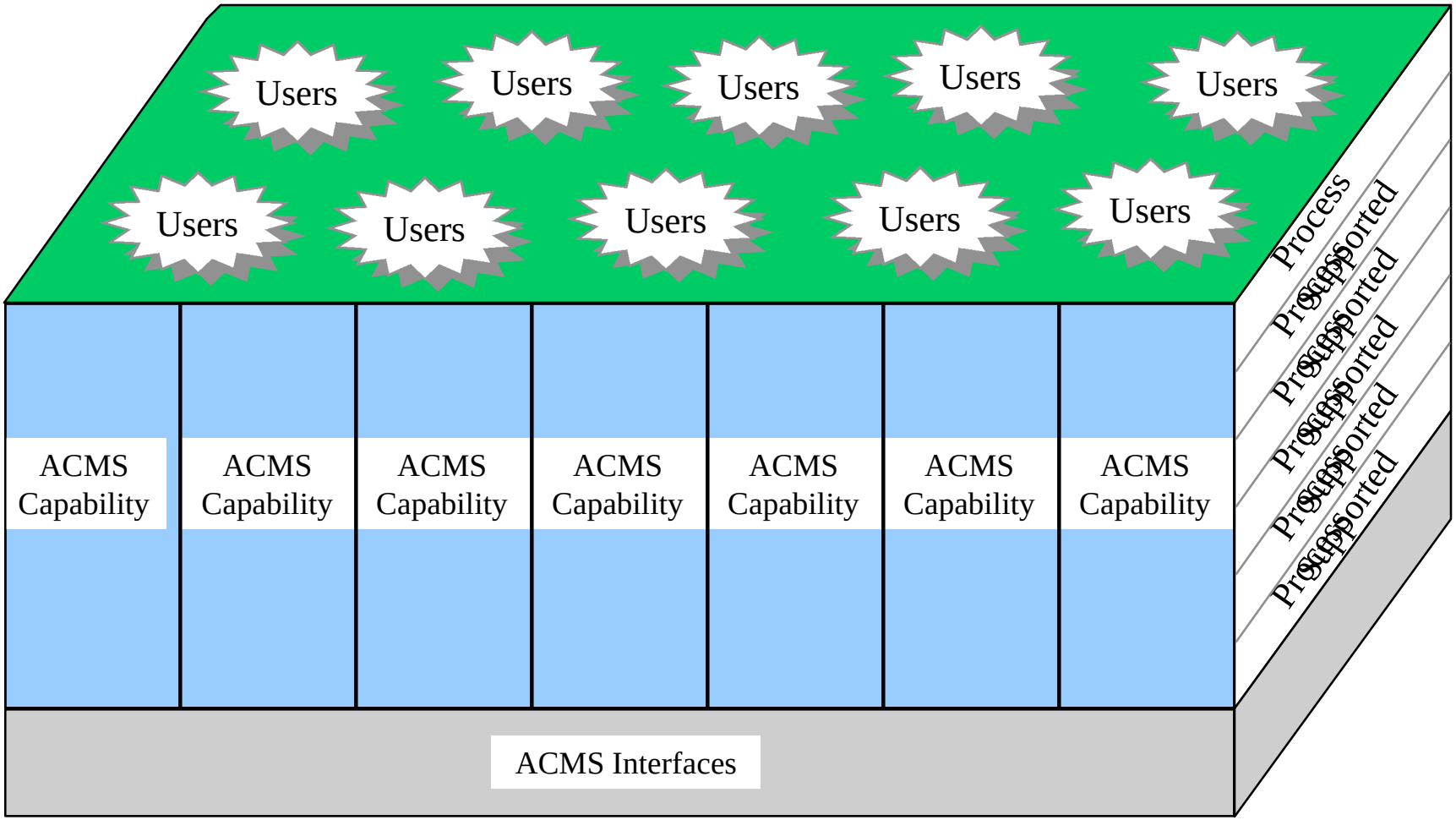
- Configuration Identification
- Configuration Change Control
- Configuration Status Accounting
- Configuration Audit
- Product Structure Management
- Data Location, Accessing, & Retrieval
- Data access control & security

- Workflow Management
- Data Vaulting
- Data Translation/Conversion
- Imaging Services (e.g., Viewing & Redlining)
- Parts Classification
- Repository Interfacing & Control
- System Administration
- Integrated Logistics Support

Candidate ACMS External Interfaces

- JEDMICS
- Program CM/PDM Systems
- Contractor CM/PDM Systems via CITIS
- JCALS & Commercial Workflow Managers
- MSC Tech Loop Systems
- Specialized MSC Engineering Data Management Systems (Examples & POCs?)

ACMS Boundaries



CBDCOM PDM System Status

Gordon Ney
for
Mike Cantrell

Agenda

- Current Status
- Demo CBDCOM CMS Client

Current Status

- Continuing to migrate legacy data - process is taking longer than planned
- Currently Loading data from two sources
  - TD/CMS
  - Aperture cards
- Next will load data from the native sources
  - CAD (Computervision & AutoCad)
  - Interleaf

Current Status (cont)

- Difficulties in matching Aperture card Hollerith data with TD/CMS
  - Used different Doc Types
  - Naming conventions used on Aperture Cards changed over time
  - Paging and Framing Issues

Current Status (cont)

- Spent time educating vendor
  - Army's release management is different than commerial sector (commerial sector would not release a dwg with an outstanding ECP)
  - The current TD/CMS Reports have a lot of hidden complexities; data is actually processed by the report program rather than the data base
  - TD/CMS-E "hides" a looping problem that has to be solved during migration

Suggestion

- Task Force should consider meeting with the vendors to get their perspective/ lessons learned

Finalizing the Web Acquisition Strategy

ACMS Meeting
13 August 1997

EDMS Program Office
AMCOM (Prov)
Huntsville

Some Background

- **“The Edsel is here to stay.”**
  Henry Ford II, 1957
- **“You ain’t going nowhere, son.”**
  Grand Ole Opry Manager to Elvis, 1954
- **“Little Bighorn is just a souvenir stand.”**
  Lt. Col. George Custer, 1876
- **“The world has a need for perhaps 5 computers.”**
  T.J. Watson, 1955 (IBM)
- **“640K ought to be enough for anybody.”**
  Bill Gates, 1981
- **“We need to execute this now!!” Tom Craterfield, 1997**

Technology Penetration

Time to 10 million users

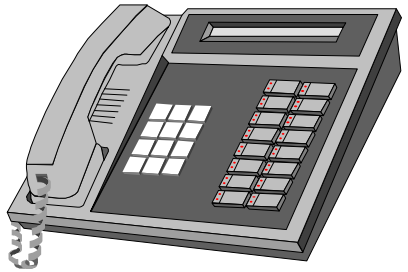
- **Pager** **41 years**
- **Telephone** **38 years**
- **Fax** **22 years**
- **VCR** **9 years**
- **Cellular** **9 years**
- **PC** **7 years**
- **CD-ROM** **6 years**

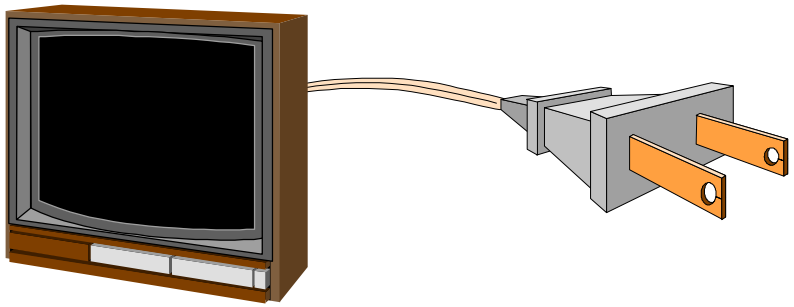
- **Web** **3 years**
  - 125% per year current growth rate in US/Canada
  - Web based operations, application development, deployment and use/training is **Relatively** cheap
  - Microsoft vs. Netscape - “All that can be said is Netscape still exists - Netscape has taken the high road”

Why are we here??

Finalize the Web Acquisition Strategy

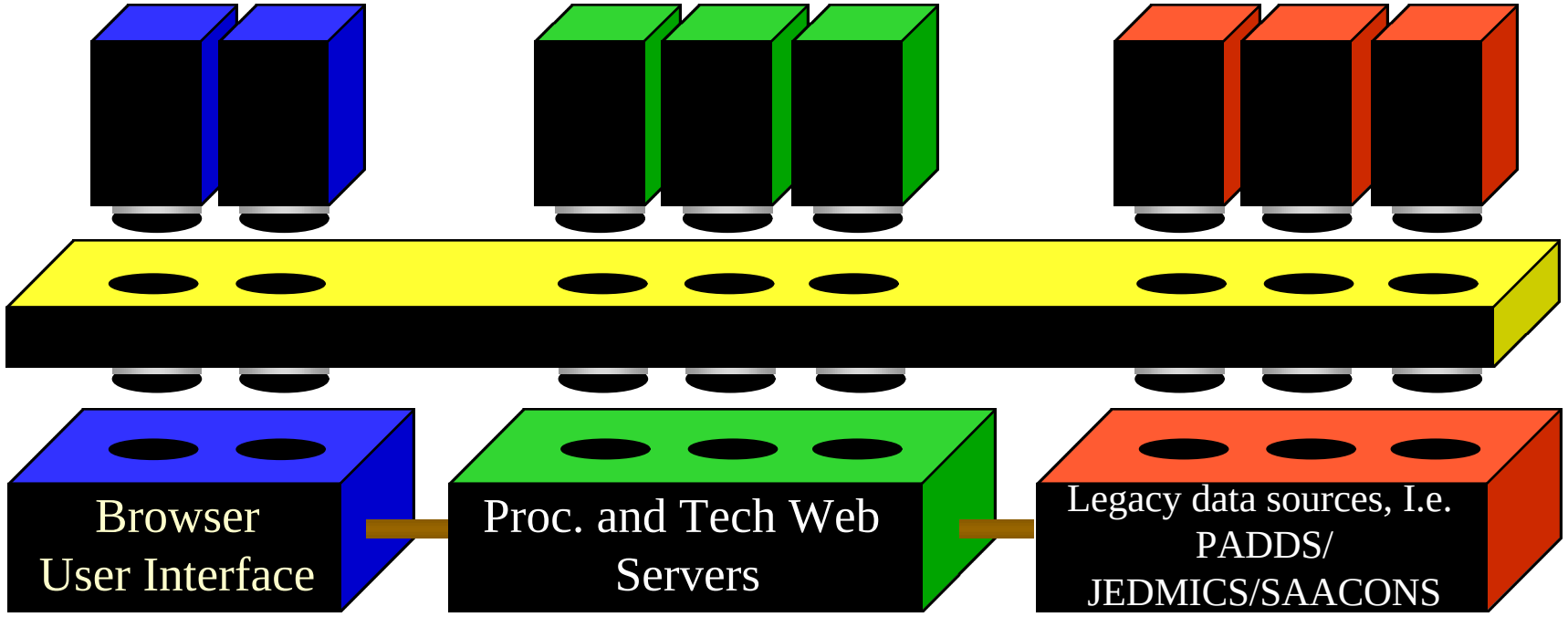
- **Agree on approach**
- **Agree on specific capabilities**
- **Agree on how**
- **Agree on who**
- **Agree to Agree**
  - **Not a standard system - just standards and smart business**
  - **Building block to future operational efficiencies once all sites are up and running with electronic commerce**
  - **Sites flexibility to meet commodity and organization unique requirements quickly and efficiently**





The Goal of this Initiative

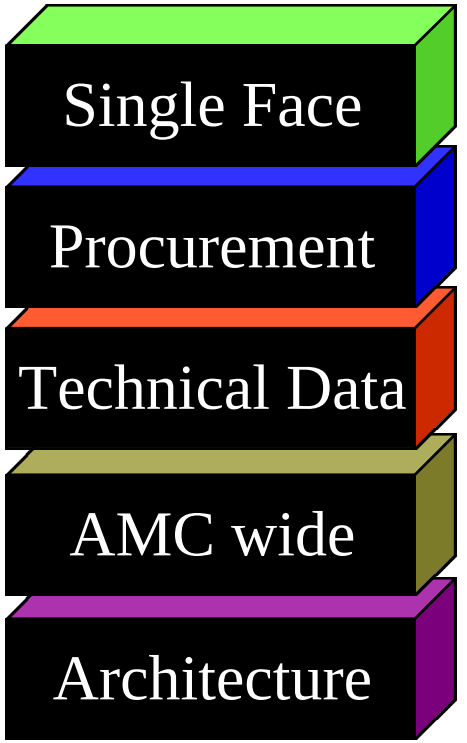
Maximum COTS/Page flexibility while ensuring interoperability and operational efficiency



The Pieces

Standards are Essential

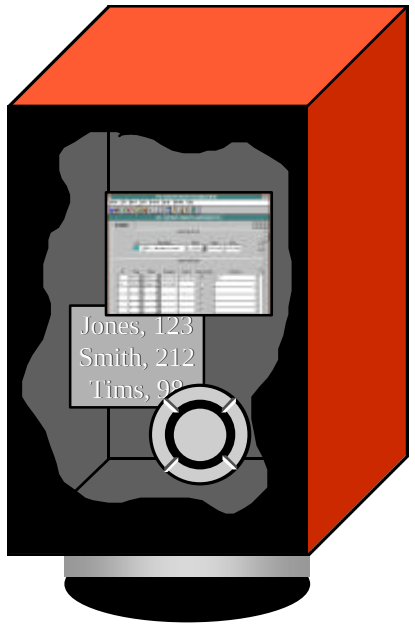
- **A single face to industry**
  - We will define a minimum
- **Procurement Interface**
  - RFP and PPI out - Bid Response in
- **Technical Data Interface**
  - Technical Data out & order forms
- **AMC wide access**
  - Internet navigation & intranet reporting
- **Architecture**
  - Centralized vs. Decentralized
- **Security of it all :-)**



Define ⇒ Execute ⇒ Operate ***by the end of Dec***

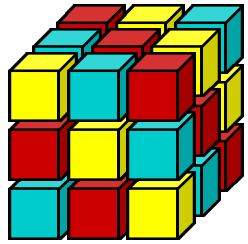
This is a difficult task

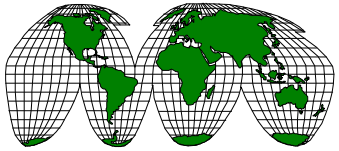
- **Diverse acquisition activity**
  - Spares, Systems, R&D, etc.
- **Diverse organization makeup**
- **We will be flexible to accommodate diversity**
- **Must agree to a framework**



More Challenges

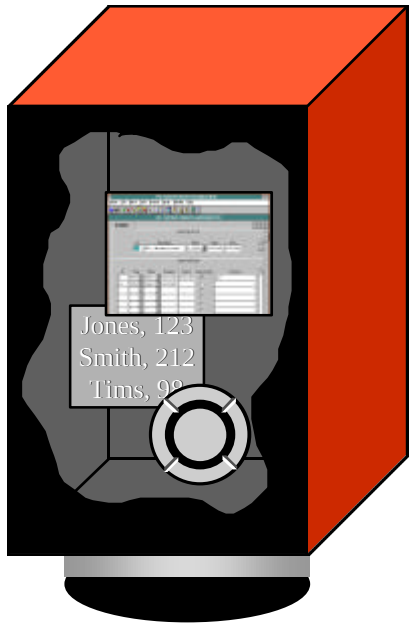
- **What is the position of this group regarding adopting a standard toolset and infrastructure to support this strategy??**
  - **JCALS**
  - **Notes/Domino**
  - **Open Systems Standards & COTS**
  - **Other**
- **Initial efforts will be based on existing infrastructures**





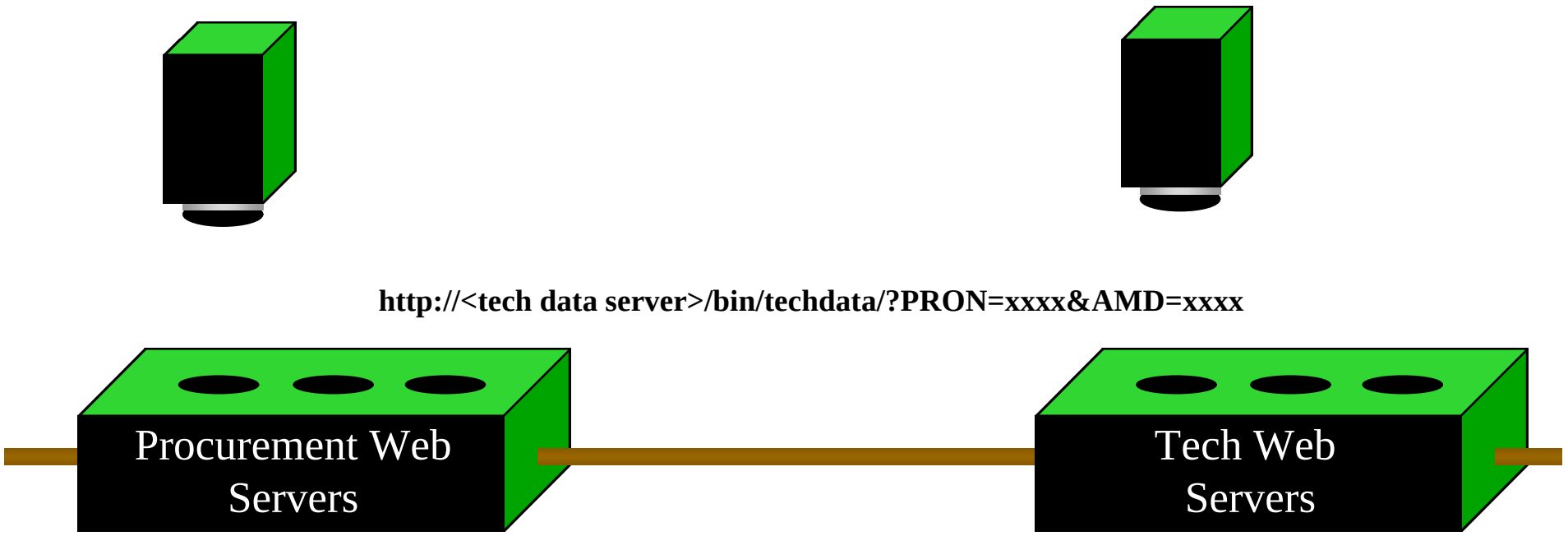
Definition of the Proc to Tech Data Interface

- **Requirement**
  - Define interface between servers to enable interoperability
  - Standard syntax necessary
- **Goal**
  - Achieve agreement on specific linking syntax between solicitation pages and technical data pages



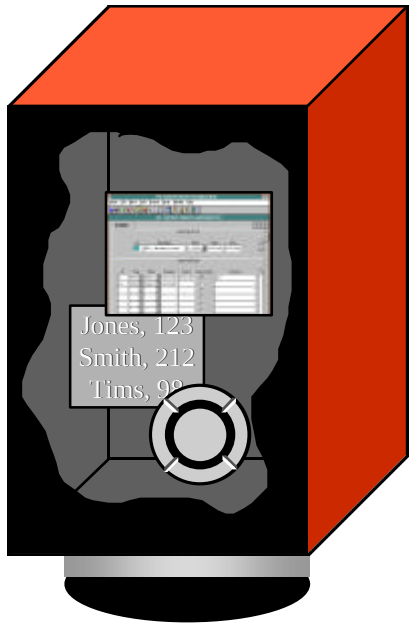
Procurement to Tech Data

Maximum COTS/Page flexibility while ensuring interoperability and operational efficiency



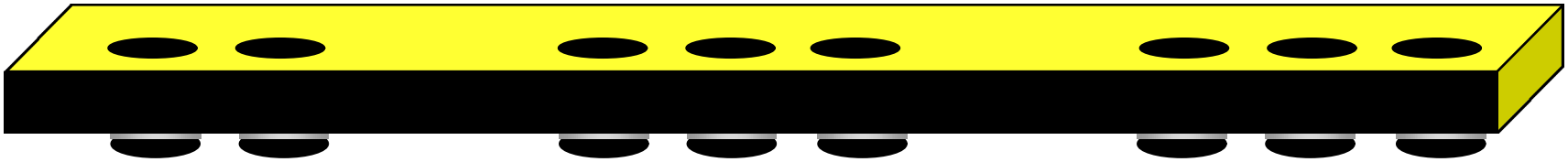
Definition of the Proc. System Interface

- **Requirement**
  - Support to the single face to industry
- **Goal**
  -



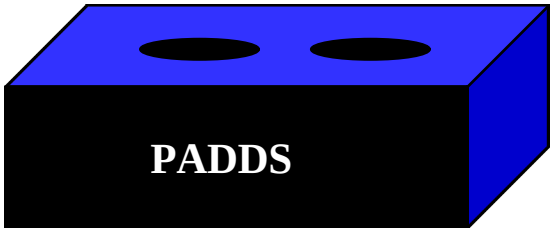
Definition of Proc. System Interface

Identify elements - execute hows
ACTION: Sherri Howard, Team Lead



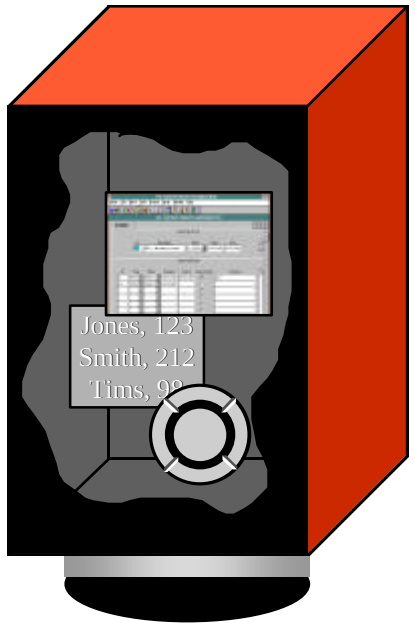
Solicitation[AMC]
PRON(s)
Description [AMC]
NSN(s)/FSC [AMC]
Opening/Closing Dates
POC & Phone
e-mail
SIC [AMC]

Actual Solicitation Text(PDF)
Solicitiation Amendments
PPI
X.12 840 (3010)
Input of 843 (3010 & 3050)



Definition of the Tech Data System Interface

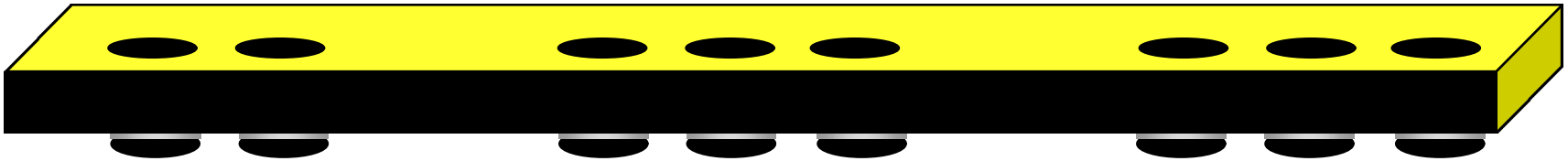
- **Requirement**
  - Define minimum meta data set and files that will be available through the web server
  - Support to the single face to industry
- **Goal**
  - Achieve agreement on specific data elements and files to be made available from the technical data support systems
- **EDIS Initiative**
  - EDMS JEDMICS interface and review process (JAVA based)



Definition of Tech Data System Interface

Identify elements - execute hows

ACTION: Steve McGlone - Team Lead

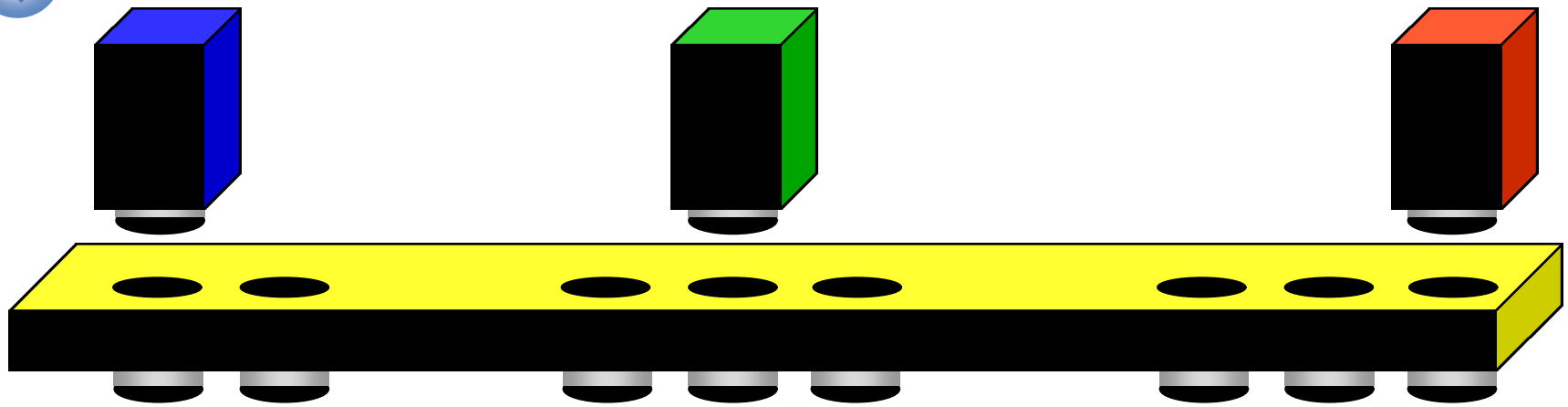


Procurement Link
Top Drawing/Spec Number
TDPL Number
Link to viewers

TDPL
CDEX Structure migrating to X.12 841
TDP in Zip format
Other supporting files

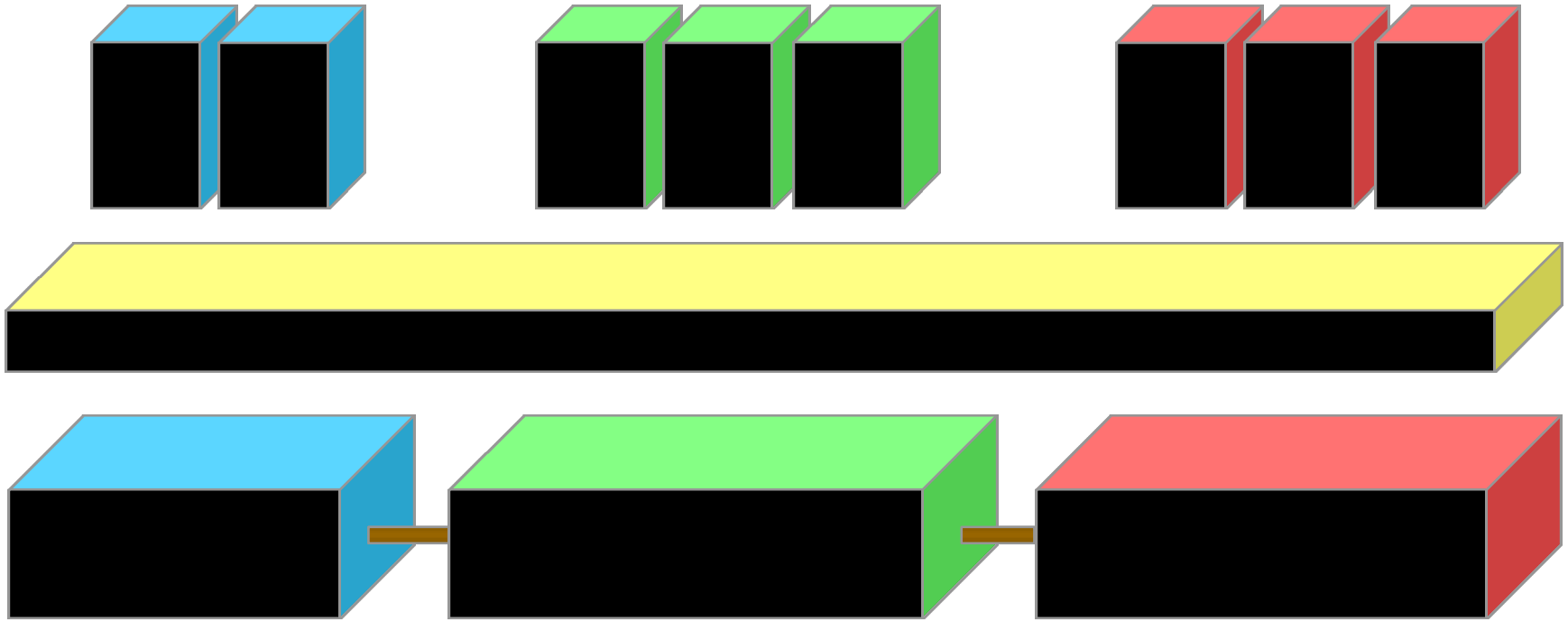
Order forms for CDROM, Stable Base, etc.

Establishing the Acquisition Toolbox



- **AMC Wide data/application source**
- **All scripts, HTML, etc will be posted for download on demand at AMC Home Page**
- **Includes client, server, and interface capabilities**

The Security Scheme

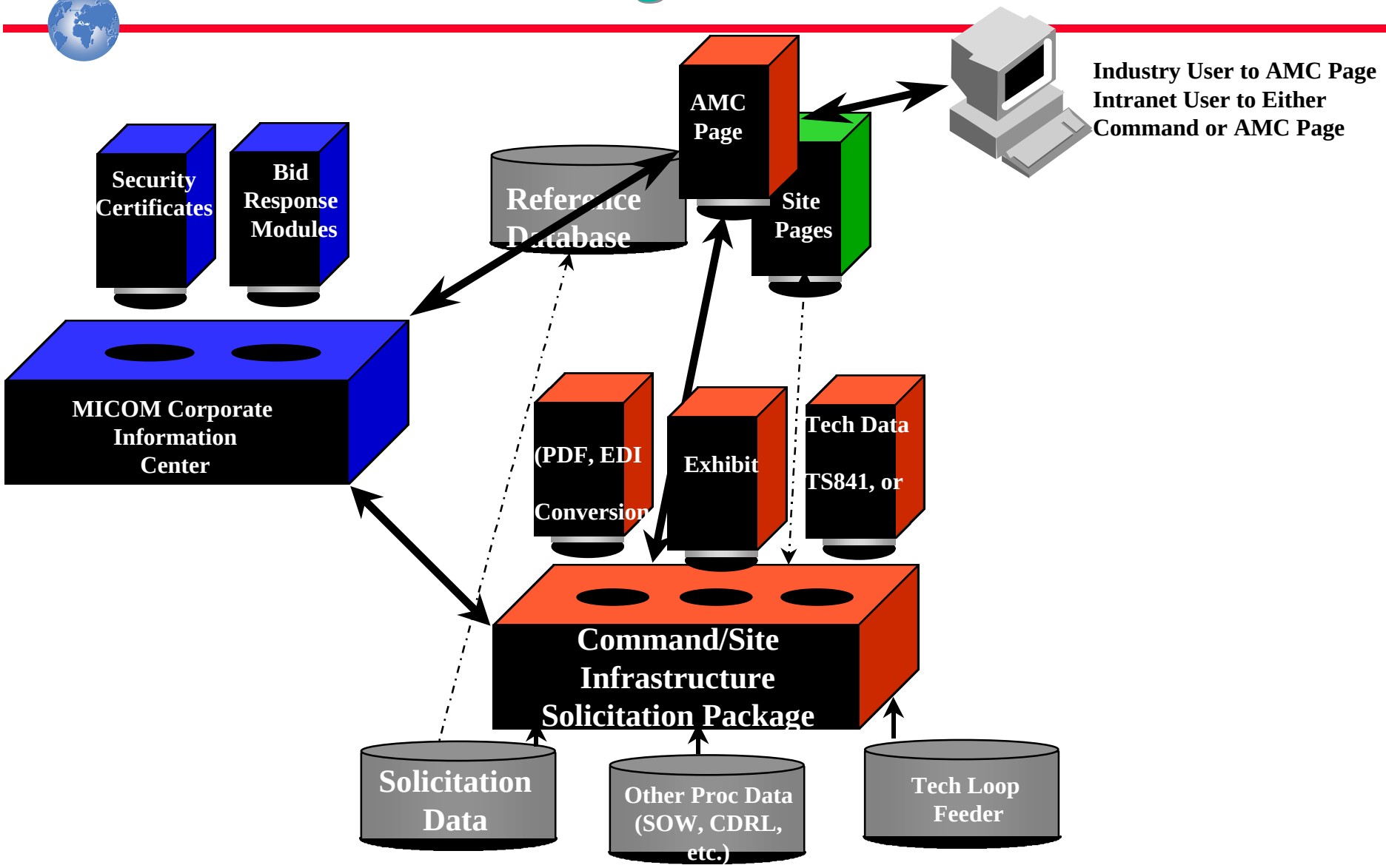


Secure Socket Layer (SSL) 3.0

Proxy Services
User Id/Password Login

Certificate Services (Redstone

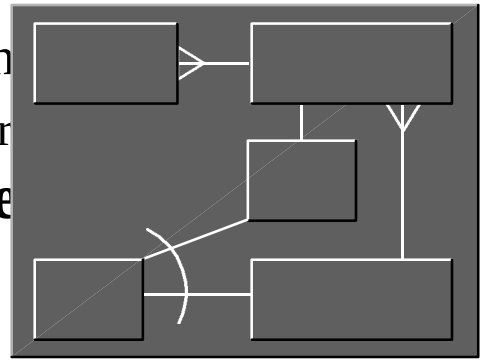
The Overarching Architecture

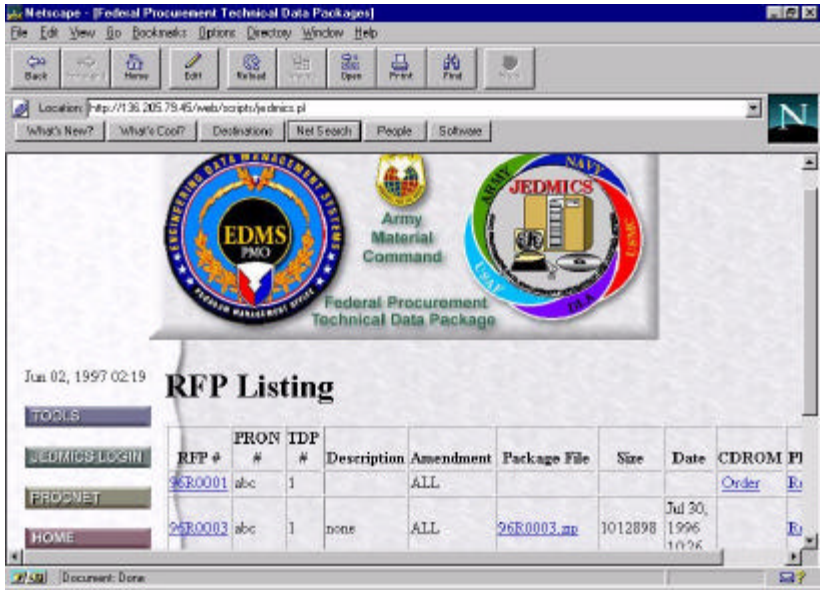


Defining the future process

AMC-wide ongoing definition

- **Team Leaders to oversee execution**
  - Meet as necessary to further refine requiremen
    - Prototype complete prior to next PARC Confer
- **Team Leaders define funding requireme to furnish to Mr. Thompson**





Automated Document Conversion System (ADCS)

Automated Document Conversion System (ADCS)

- **Raster to Vector Conversion Program**
  - Initiated in 1995, managed by DPS
  - Army did not participate in 1996
  - Services managed in 1997
- **Congressionally Mandated**
  - Specific contractors teamed to make funding available
  - Specific contractors involved with execution

ADCS Goals

- **Convert to “useable data format”**
  - Level 1 - Raster only
  - Level 2 - Raster plus cleanup
  - Level 3 - Automatic Vectorization
  - Level 4 - Text & Auto Vectorization
  - Level 5 - Enhanced Vectorization
  - Level 6 - CAD Perfect
- **Establish conversion infrastructure to complement repository infrastructure**
- **Initiate process to be “completely” digital by 2002**

ADCS Tasks

- **3 Tasks awarded to Intergraph CAD-2**
  - Comprehensive requirements survey
    - $511M Army requirement submitted
  - Prototype of Audre (Vector Systems), VP Max, and Intergraph conversion software
  - Bulk Raster to Vector Conversion
    - Army DCSLOG priority list for Tech Manuals is basis
    - TACOM systems top the list - M88 family is initial target
    - National Ground Intelligence Center (NGIC) OCONUS Facilities conversion requirements
  - Production conversion capability TBD
- **Intergraph is Team Lead for competition among the vendors**

ACMS Task Force Meeting
Day 1 Summary

Consensus Summary

- Task Force recommended a more creative approach with less dependency on prior requirements:
  - Continue with strawperson process model;
  - Examine Vault, Processes, Simple, and Complex Links Integration and Interaction description of PDM; and
  - Incorporate commercially available PDM capabilities.

Envisioning Meeting Description

Ed Dorchak

August 14, 1997

Agenda

- Meeting Objectives
- Approach
- Meeting Topics
- Schedule

Envisioning Meeting Objectives

- Develop consensus on the scope of ACMS
- Identify functional capabilities for ACMS within that scope
- Develop consensus on relationship of ACMS to existing/planned systems
- Identify constraints (if any) on ACMS environment, support, and performance

Overall Approach

- Prior to the meeting, BDM will provide strawman processes and ACMS capabilities based on documentation from CMIS, PDSS, TD-CMS, MIL-STD 2549, and CCSS OI
  - Initial cut at process steps supported by ACMS presented previously
- Meeting will focus on additions, modifications, and deletions to strawmen
- Areas of disagreement will be identified as issues for later resolution

Meeting Topics

- Scope - Processes supported by ACMS
- Capabilities - Required ACMS Capabilities by Process
- Systems - Existing/planned systems which will be replaced by, subsumed by, or interface externally with ACMS
- Environment - Constraints on ACMS regarding hardware, software, networking/communications, security
- Support - Constraints on ACMS regarding administration, availability and maintenance, training
- Performance - Expectations on system response

ACMS Process Scope
Input

- Prior to the meeting MSCs will receive strawman indentured list
  - List will have heavy CM focus based on CMIS, TD-CMS
  - MSCs must identify other supported processes
- MSCs review list and provide additions, deletions, and modifications

ACMS Process Scope
Approach

- Work through the indentured list, identifying lowest level processes supported by ACMS
- Discuss additions and modifications to the list and obtain consensus
- Identify processes on list not supported by ACMS
- Focus is on completeness of ACMS-supported processes, not process structure/hierarchy

ACMS Process Scope
Output

- Indentured list of processes supported by ACMS
- List of action items for examining and resolving processes for which consensus was not achieved

ACMS Capabilities
Input

- Prior to the meeting, MSCs will receive strawman list of capabilities by process
  - Emphasis on CM likely based on available source documents
- Capabilities will be listed with origin and recommended disposition
- MSCs will agree with or disagree with comment on recommended disposition

ACMS Capabilities
Approach

- Work through the indentured list of processes, focusing on MSC changes to disposition of ACMS capabilities
- Discuss associated additions, deletions and modifications to the capabilities and obtain consensus
- Identify capabilities for which consensus is not achieved or which require more analysis

ACMS Capabilities
Output

- ACMS capabilities for each process
- List of action items to resolve disposition of capabilities for which consensus is not achieved or which require more analysis

ACMS Related Systems
Input

- Prior to the meeting MSCs will identify systems supporting each lowest level process and capability in the indentured list
- For each system, state whether it will be replaced by, subsumed by, or interface externally with ACMS

ACMS Related Systems
Input (Cont.)

- For Replaced systems
  - Identify capabilities to be provided by ACMS
- For Subsumed or External System Interfaces
  - State whether they request from or provide to ACMS
  - Provide list of requests which constitute functional interface

ACMS Related Systems
Approach

- Work through the indentured list of processes and capabilities, discussing supporting ACMS systems
- Obtain consensus on supporting systems and whether they will be replaced, subsumed or external
  - For replaced systems, map system capabilities to ACMS capabilities
  - For subsumed and external, obtain consensus on interface direction and function

ACMS Related Systems
Output

- Interfacing systems by capability
- Additional ACMS capabilities based on replaced systems
- Interface definitions by direction and functionality
- List of action items to resolve system interfaces for which consensus is not achieved or which require more analysis

ACMS Environment
Input

- Prior to the meeting MSCs formulate answers regarding constraints in the following areas:
  - Hardware platform restrictions
  - Operating system restrictions
  - Networking restrictions (intra- and inter-site)
  - Connectivity and Bandwidth restrictions
  - Security requirements

ACMS Environment
Approach

- For each input topic area
  - Identify most prevalent constraint
  - Examine other more restrictive constraints for accommodation
  - Obtain consensus on environmental constraints

ACMS Environment
Output

- List of minimum environmental requirements for ACMS
- List of action items to resolve ACMS environment issues which require resolution or further study

ACMS Support
Input

- Prior to the meeting MSCs formulate answers regarding constraints in the following areas:
  - Maximum ACMS administrative time
  - Maximum training time for ACMS operators, administrators, maintainers
  - Minimum operator, administrator, maintenance support personnel qualifications
  - ACMS required availability and allowable downtime
  - Anticipated Help Function Availability

ACMS Support
Approach

- For each input topic area
  - Identify most prevalent constraint
  - Examine other more restrictive constraints for accommodation
  - Obtain consensus on support constraints

ACMS Support
Output

- List of minimum support requirements for ACMS
- List of action items to resolve ACMS support issues which require resolution or further study

ACMS Performance
Input

- Prior to the meeting MSCs formulate answers regarding constraints in the following areas:
  - ACMS Response Time
  - ACMS Data Refresh Time
  - ACMS User Interface

ACMS Performance
Approach

- For each input topic area
  - Identify most prevalent constraint
  - Examine other more restrictive constraints for accommodation
  - Obtain consensus on performance constraints

ACMS Performance
Output

- List of minimum performance requirements for ACMS
- List of action items to resolve ACMS performance issues which require resolution or further study

Meeting Schedule

- Day 1-2: ACMS Scope
- Day 2-3: ACMS Capabilities and System Interfaces
- Day 4: ACMS Environment and Support
- Day 5: ACMS Performance, Wrap-up, and Action Items

Action Items

- MSCs to collect examples of commercial specifications relevant to ACMS.
- IEA to request Crusader CITIS CONOPS and requirements set.
- Establish a working group to determine TDP packaging for web acquisition strategy.

Envisioning Meeting Data Call Discussion

Ed Dorchak

August 14, 1997

Agenda

- Philosophy
- ACMS Process Data
- ACMS Capabilities Data
- ACMS Related Systems Data
- ACMS Environment Data
- ACMS Support Data
- ACMS Performance Data

Philosophy

- Previous draft data call too open ended
- Revised data call emphasizes responding to strawmen or specific questions and soliciting limited responses
- Does not preclude more open-ended responses
  - *However, notice prior to the Envision meeting will be appreciated*

ACMS Process Data
Example

MODEL ID #	*PROCESS*	*Accept*	*Modify*	*Modification*
10000000	**CONFIGURATION MANAGEMENT**			
11000000	**PERFORM CONFIGURATION IDENTIFICATION (CI)**			
11100000	IDENTIFY CONFIGURATION ITEMS			
11110000	RECORD CONFIGURATION ITEMS (HW/SW)			
11120000	ENSURE ADEQUATE CI IDENTIFIERS			
11130000	IDENTIFY CI TO PROGRAM TYPE WBS STRUCTURE			
11140000	RECORD CI DOCUMENTATION BREAKDOWN (Walk-up, Walk down, CB)			
11150000	MAINTAIN SOFTWARE VERSION CONTROL			
11151000	RECORD SOFTWARE VERSION NUMBER			
11152000	RECORD COMPLETE BRKDWN OF SOFTWARE RELATNSHIPS			

ACMS Process Data
Instruction

- Compare presented processes to processes you wish to be supported by ACMS - Use process description as a guide
- Do not be overly concerned with process structure-only lowest level process completeness
- Add any processes not specified in the model
  - Assign it Number MSC-N (e.g., CECOM-1, etc.)
- Check "**Accept**" for any lowest level process to be supported by ACMS
- Check "**Modify**" for any lowest level process which needs modification - Provide modification in appropriate column

ACMS Capabilities Data
Example

MODEL ID #	*PROCESS*	*ACMS Capabilities*	*Status*	*Origin*	*Origin Text*	*MSC Comment*
10000000	**CONFIGURATION MANAGEMENT**	**NA**	**NA**	**NA**	**NA**	**NA**
11000000	**PERFORM CONFIGURATION IDENTIFICATION (CI)**	**NA**	**NA**	**NA**	**NA**	**NA**
11100000	IDENTIFY CONFIGURATION ITEMS	**NA**	**NA**	**NA**	**NA**	**NA**
11110000	RECORD CONFIGURATION ITEMS (HW/SW)	ACMS shall display Configuration Items (CIs) within ACMS	Derived	CMIS SRS	The system shall display Configuration Items (CIs) within CMIS.	Concur
		The system shall have the capability to identify Hardware Configuration Items (HWCI) or Computer Software Configuration Items (CSCI) for a unique engineering document.	Accepted	CMIS SRS		No. Delete per Army decision (date/authority)
		The system shall have the capability to identify a unique computer program identification number (CPIN) for the specified CSCI.	Challenged	TD-CMS FD		Concur
11120000	ENSURE ADEQUATE CI IDENTIFIERS					

ACMS Capabilities Data
Instruction

- Compare ACMS capabilities, origin, origin text and status to desired ACMS capabilities for each lowest level process
- For each strawman capability presented, indicate acceptance (Concur) or rejection (No) of disposition in **Comment** column
  - For each “No”, provide suggested modification
- Add additional capabilities supporting any lowest level process as necessary

ACMS Capabilities Data
Status Key

- Accepted: Recommended ACMS capability
- Challenged: Not recommended as ACMS capability
- Derived: Capability has been derived from one or more capabilities in origin document. Origin(s) and Origin Text(s) are provided

ACMS Related Systems Data Example

MODEL ID #	***ACMS CAPABILITY***	***System***	***Replace, Subsume, Interface***	***From/ To ACMS***	***Requests***
10000000	**NA**				
11000000	**NA**				
11100000	NA				
11110000	The system shall have the capability to identify Hardware Configuration Items (HWCI) or Computer Software Configuration Items (CSCI) for a unique engineering document.	System 1	Interface	From	Request 1
		System 1	Interface	From	Request 2
	Capability 1	System 2	Replace	NA	NA
	Capability 2	System 2	Replace	NA	NA
11120000					
11130000					
11140000					
11150000					

ACMS Related Systems Data
Instruction

- For lowest level processes supported by ACMS, enter system name which supports the capability in **System** column
- Indicate in adjacent column by R, S, or I whether system will be replaced, subsumed, or externally interface with ACMS
- For systems replaced by ACMS, write the system capabilities which ACMS will provide in the ACMS Capabilities column

ACMS Related Systems Data
Instruction (cont.)

- For systems subsumed by or interfacing externally with ACMS, indicate in the **From/To ACMS** column whether the information flow is from ACMS to the system or to ACMS from the system
- Indicate in Request Column what data is being passed
- Example:

System	**From/To ACMS**	**Request**
JEDMICS	To ACMS	Drawings

ACMS Environment Data
Hardware

- Restrictions on Hardware Platform Type? (e.g., PC, MAC, Workstation)
- Minimum Hardware Platform Configuration Parameters (e.g., processor speed, RAM, local storage size)
- Minimum Hardware Peripherals (e.g., Floppy Drive, Tape Drive, CD-ROM, etc.)

Answers should be based on hardware available to ACMS users

ACMS Environment Data
Software

- Restrictions on Operating System? (e.g., Windows (NT or 95), Unix)
- Restrictions on Networking (e.g., network operating systems, firewalls, communications protocol)
- Restrictions on Connectivity (e.g., Bandwidth)

Answers should be based on ACMS site configurations

ACMS Environment Data
Security

- Level of Control (e.g., by site, by ACMS access, by user type, by user)
- Granularity of Control (by data source, by data type, by specific data)
- Privileges (Read, Write, Add, Delete)

Use CMIS Specification as a Model

ACMS Environment Data
CMIS Security Example

- The system will meet security requirements by controlling access to the Oracle database and to the data in the CMIS application tables.
- The system will control database access by requiring users to have a valid Oracle user ID and password.
- The system will control access limiting table access to authorized users only.
- The system will provide the capability to administer and control table access through assigning users to groups and granting table access privileges to the groups.
- The system will meet security requirements by providing application security.
- The system will control access to the CMIS functions through a menu that displays only those functions a user has permission to perform.

ACMS Support Data

- Maximum amount of time required for ACMS administration
- Permissible down time (e.g., no more than x hours per week for routine maintenance)
- Minimum qualifications for ACMS operator, administrator, and maintenance personnel
- Maximum amount of training time required
- Need for ACMS Help function

ACMS Performance Data

- Maximum permissible response time
- Maximum permissible data refresh time
- User interface restrictions

Envisioning Meeting Data Call Discussion

Ed Dorchak

August 14, 1997

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ACMS Performance Data

- Maximum permissible response time
- Maximum permissible data refresh time
- User interface restrictions

Agenda - Afternoon 14 August

Time	Topic	Speaker
1:00 PM	**ACMS Wrap Up**	G. Ney
1:45 PM	*Break*	
2:00 PM	Review Status of JEDMICS Implementation	J. Knowles
4:30 PM	*End of Meeting*	

Automated Configuration Management System (ACMS) Task Force Meeting Wrap-Up

Gordon Ney

U.S. Army Industrial Engineering Activity

(309)782-6586

14 August 1997

Meeting Purpose

- Present what has transpired since the last meeting
- Determine how we will proceed from here
- Hear about some related efforts
- Discuss the status of JEDMICS Implementation

Background on ACMS

Current Engineering Data Environment

- Army data primarily stored in raster format
- Contractors are submitting tech data in more “intelligent” data formats
- TD/CMS can’t manage “intelligent” data
- Forces new producers to “reinvent” lost data intelligence
  - metadata
  - geometry

Goals of Acquisition Reform

- Use contractor systems and data formats as much as possible
- Government won’t own as much data
- Government must have access (insight) to contractor data
- Increase Government productivity

How do we achieve those goals?

Product Data Management (PDM)!

What is PDM?

A tool that manages all product-related information - including electronic documents, digital files, and database records.

PDM keeps track of all the data required to design, test, manufacture, support and maintain products.

PDM systems are client/server based applications that are moving very rapidly toward web based clients capable of at least find, view, print.

PDM Functions

- Product Structure/Bill of Materials
- Configuration Management
- Work/Process Flow Management
- Vaulting
- Program Management
- Imaging Services
- Parts Classification

PDM Benefits

Reduces:

- Design time
- Design change time
- Document delivery time
- Production costs
- Design errors

Improves:

- Data access
- Data and process quality
- Business process efficiency
- Integrated Product Development methods
- Configuration Control
- Communications

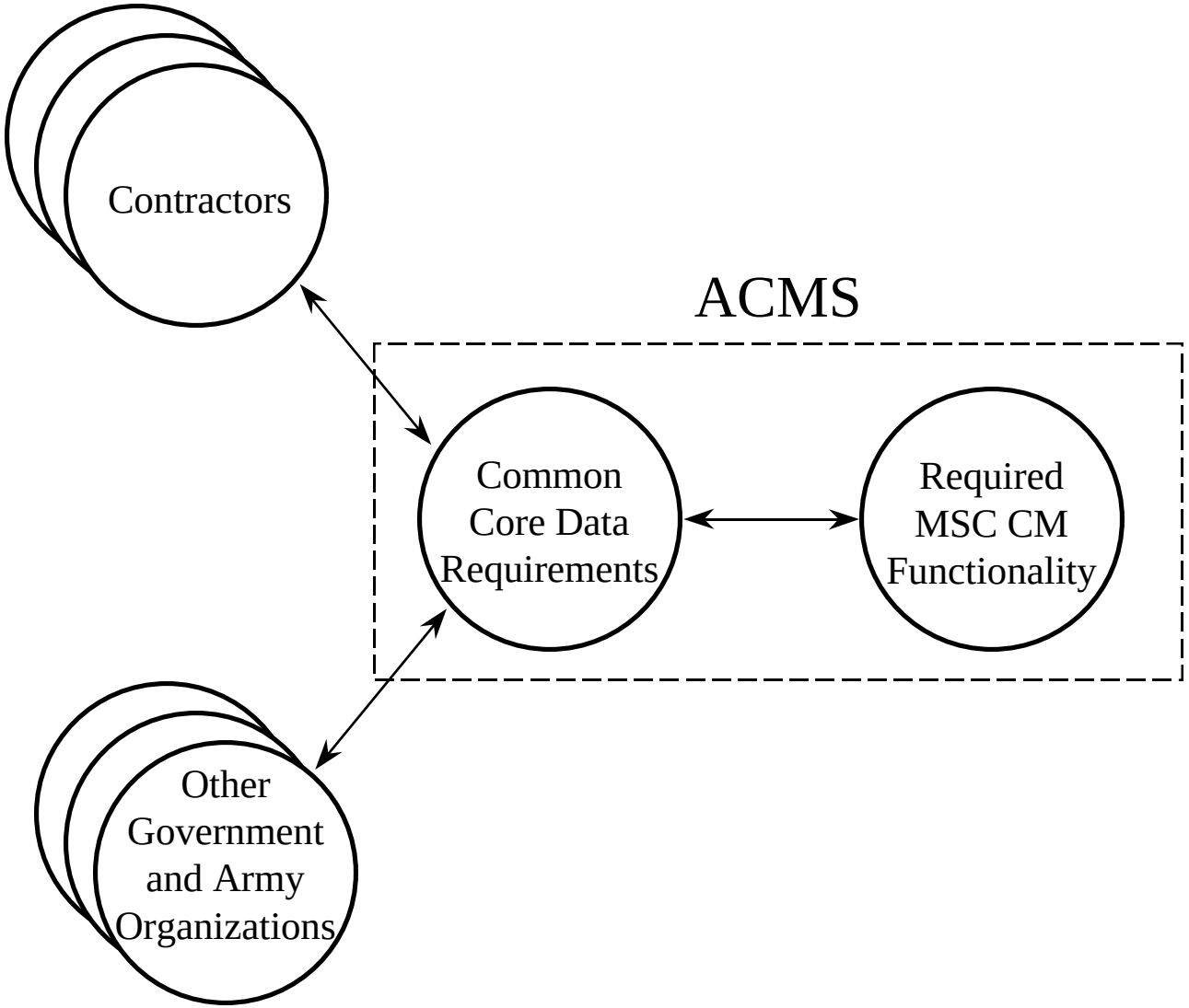
ACMS Key Events

Event	Planned	Actual
IEA submit Plan of Action for approval	Feb 97	31 Jan 97
CG AMC approve IEA Plan of Action	Feb 97	12 Feb 97
Hold project kick-off meeting at CBDCOM	Mar 97	13 Mar 97
DCSRDA approval of revised Plan of Action		7 May 97
MG Beauchamp letter soliciting MSC support		23 May 97
Award of support contract to BDM	Jun 97	17 Jun 97

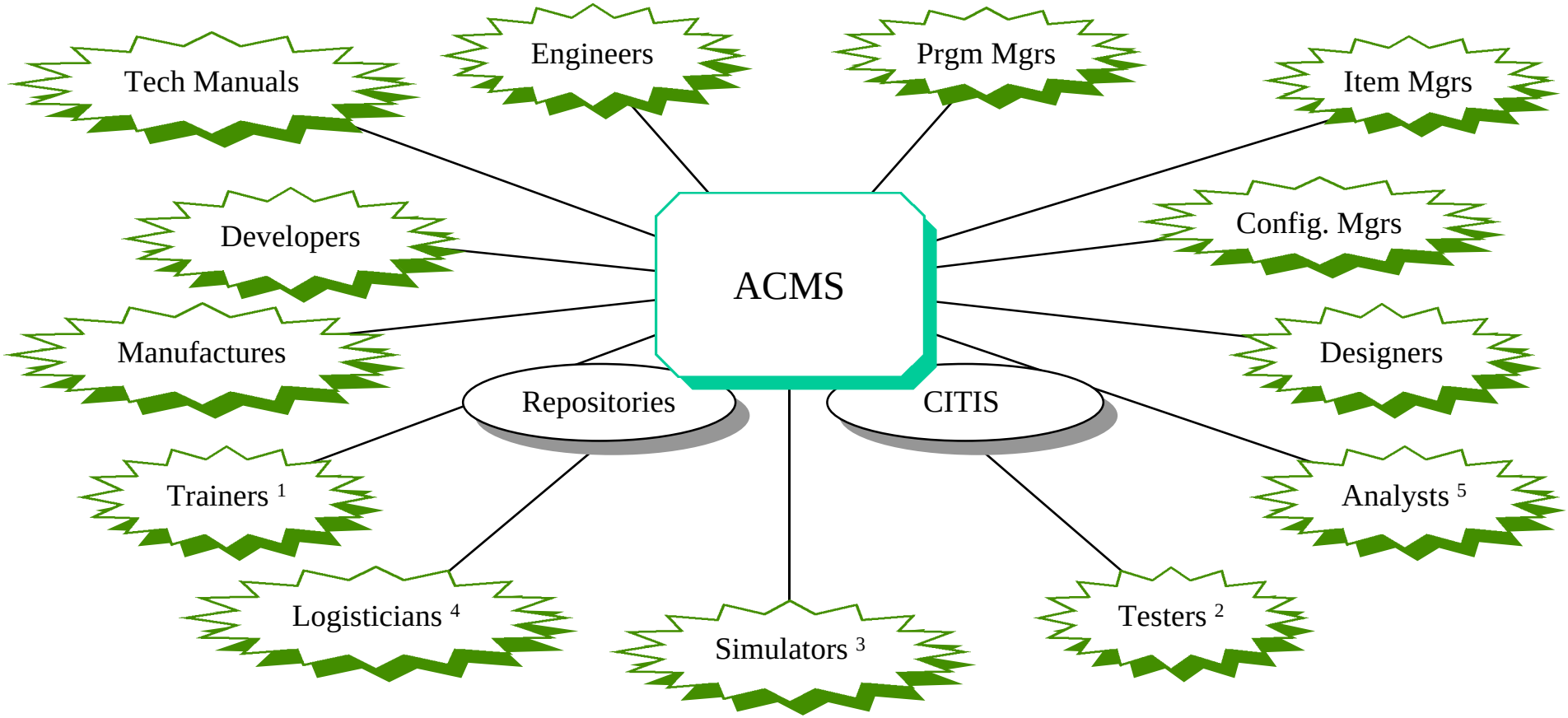
ACMS Vision

ACMS will provide the required data when it is needed and in a form that the user can apply to accomplish the mission. The required data consists of all the engineering data necessary to completely define an item for the intended purposes of specifying, designing, analyzing, manufacturing, maintaining, sustaining, testing, inspecting, and dispositioning that item over its entire life span. The ACMS must also operate in a diverse Army environment, integrate with other MSC business processes, and communicate with other MSC, government and industry information management systems.

ACMS Concept of Operations



Candidate
ACMS User Communities



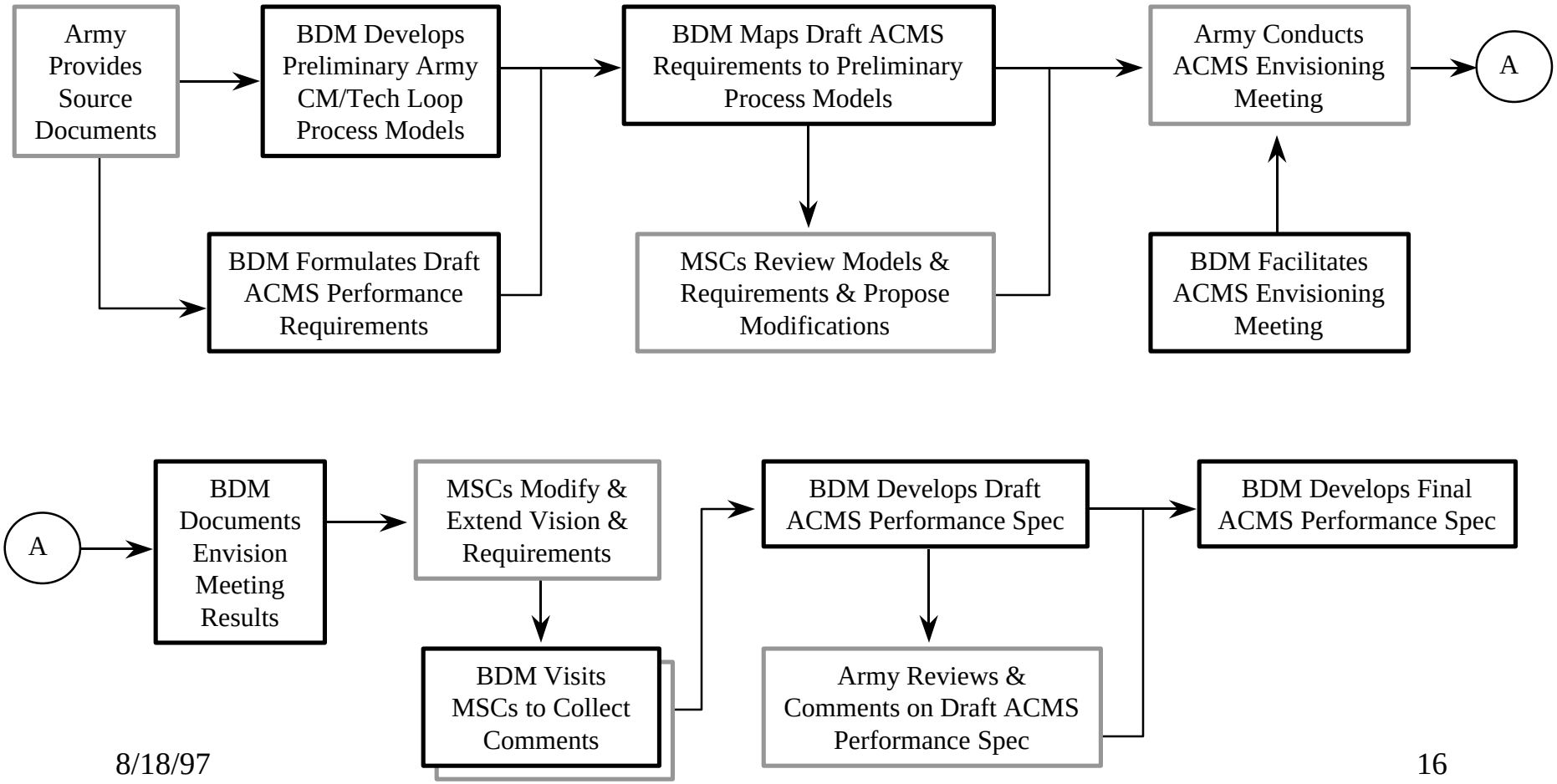
1 - Including developers of training devices and simulations.
2 - Developmental & operational testers.
3 - Including developmental & war fighting simulations.
4 - Supporting maintenance, repair, & Total Asset Visibility.
5 - Survivability, industrial base, & operations analysts.

Candidate ACMS Capabilities

- Configuration Identification
- Configuration Change Control
- Configuration Status Accounting
- Configuration Audit
- Product Structure Management
- Data Location, Accessing, & Retrieval
- Data access control & security

- Workflow Management
- Data Vaulting
- Data Translation/Conversion
- Imaging Services (e.g., Viewing & Redlining)
- Parts Classification
- Repository Interfacing & Control
- System Administration

Approach


Army Provides Source Documents
BDM Develops Preliminary Army CM/Tech Loop Process Models
BDM Maps Draft ACMS Requirements to Preliminary Process Models
Army Conducts ACMS Envisioning Meeting
A
BDM Formulates Draft ACMS Performance Requirements
MSCs Review Models & Requirements & Propose Modifications
BDM Facilitates ACMS Envisioning Meeting
A
BDM Documents Envision Meeting Results
MSCs Modify & Extend Vision & Requirements
BDM Develops Draft ACMS Performance Spec
BDM Develops Final ACMS Performance Spec
BDM Visits MSCs to Collect Comments
Army Reviews & Comments on Draft ACMS Performance Spec

ACMS Performance Spec

Process Models

Configuration Management
- Configuration Identification
- Configuration Control
- Configuration Audit
- Configuration Status Accounting

Tech Loop
- Retrieve Tech Data
- Perform Issue Check
- Perform Engineering Analysis
- Update Tech Data

Existing Requirements Documents

- CCSSOI
  - CMIS PRs/SCRs
    - CMIS Tst Proc
- TD/CMS FD
  - PDSS SRS
    - CMIS SRS

MSC Representatives

- •Vision
- •Ideas
- •Processes
- •Requirements
- •Modification
- •Approval

Automated Configuration Management Performance Specification

ACMS Consensus

- ACMS requirements development needs to be forward thinking and creative so as to break the old paradigm:

Transition from Document Centric to Product Centric Data Management

Related Efforts

- Crusader Program CITIS Implementation
- CBDCOM and CECOM PDM Demos
- CMStat Evaluation Results
- Automated Document Conversion System
- Web Acquisition Strategy
- Preliminary ACMS Implementation Strategy

Status of JEDMICS Implementation

- PM JEDMICS
- AMCOM (MICOM & ATCOM)
- CECOM
- IOC
  - RIA
  - Depot Summary
- TACOM
  - Warren
  - ARDEC

Army JEDMICS Update

14 August 1997

AMC ENGINEERING DATA MANAGEMENT SYSTEMS
Program Management Office
Mr. Henry Younger, PM

Purpose

- **Provide update of DoD/Army JEDMICS**

  Updates since last meeting:

  30 January 1997, MICOM Community
  11 February, ATCOM Community
  13 March 1997, CECOM Community
  18 March 1997, TACOM Community
  20 May 1997, Picatinny Arsenal

- **AMCOM(Prov) Site Status**

  John Montgomery (systems) &
  Carla Crawford (functional)

DOD / DA / AMC
JEDMICS Directives

Directed by DUSD(L), DA, AMC:

- 1992, EDMICS selected as Joint service repository (i.e. JEDMICS)
  - DSREDS / EDCARS will not be further enhanced
  - Release 2.5, Minimal Functionality to shut down DSREDS/EDCARS

- Release 2.5 Fielding to Army & USAF, Aug. 1996 - Dec. 1996
  - 5 month Initial Operational Capability (IOC) Test for Rel. 2.5
  - Insure JEDMICS 2.5 meets minimal functionality

- Release 3.0, Equal or Exceeds DSREDS / EDCARS.
  - Architecture redirection in process IAW recent ITMRA
  - 1998 Schedule,

*** DSREDS is beyond its life expectancy …. must be shut down soon !**

*** Continue to press for JEDMICS 3.0 Functionality**

DoD JEDMICS Milestones & Software Releases

- May 94, DoD Test Bed at Redstone, (testing & Evaluations)
- Aug. 95, Release 2.4.4 Deployed
- Aug.-Nov 95. Army Depot “mini-JEDMICS” Installs
- Apr. 96, RIA DSREDS Shutdown
- May- Jul 96. Beta Test Release 2.5
- Aug. 96, Release 2.5 Deployed
- Nov. 96, TECP-38, Released; Acc. Doc. & Pull File Fixes
- Nov. 96, PC-JEDMICS 2.0 Released
- Dec. 97, Data Call for “Show Stoppers” (TECP-42 Candidates)
- Mar. 97, TECP-51, Acc. Doc. & Batch Load Enhancements
- Apr. 97, TECP-52, Batch Load Automation Enhancements
- Apr. 97, Release 2.5.1 Deployed
- Jun. 97, 2.5.1 API (32 bit) Released
- Jun. 97, PC-JEDMICS 2.1 Released

* Come a long way in last 16 months ... still work to be done

DoD JEDMICS Planned Releases

- Release 2.5.2, Planned Release mid-September 97
  - Currently in Beta Test
- Multi-Store Upgrade, planned for Nov 97
- Release 3.0 Re-Direction (compliance with ITMRA)
  - Re-design Report Out, July 97 (documents on JRTS)
  - Planned Release date not yet announced ...
    - Incremental Releases (2-3 month intervals planned)
  - Kernalization to promote integration & incremental release
  - Security Enhancements e.g. Encrypted API
  - Web Browser enabled Access/View/Print
  - Enhanced Interface (API) to other systems e.g. CM/PDM
  - Digital Data Delivery Improvements

* Reminders: 1. Visit JEDMICS web site frequently to remain aware of news.
2. Sys Admin Refresher Training (23 June, 21 July, 11 Aug, 22 Sep)

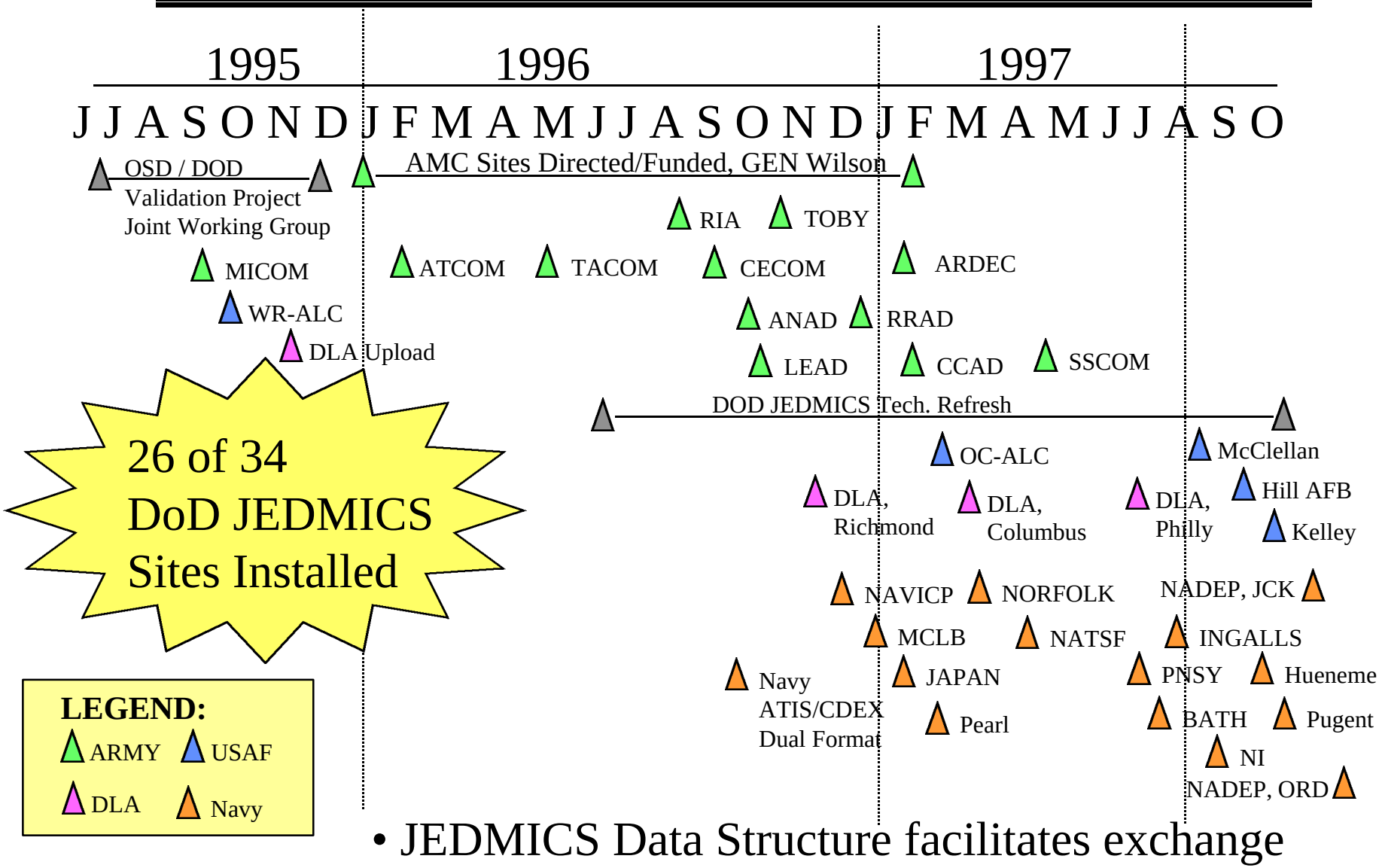
Army JEDMICS Priority Items To DoD JEDMICS

- Insure Completeness of Digital Data Migration from DSREDS
- Throughput Performance Improvements (Digital Output+Printing)
  - Image Caching via Multistore
  - Improve GOS Output Rate (Release 2.5.2 GOS Solaris port)
    - Configure multiple GOS devices
  - Enablers to further reduce aperture cards, paper plotting
  - Enablers to increase Digital Data Delivery
- Improve Accompanying Document Management (Release 2.5.2)
- Reduce Impact of Single Point of Failure Devices (e.g. ADL)
  - Image Caching (e.g. Multistore)
- Reduce number of operational "Work Arounds"
  - Prioritize Software Problem Reports (SPRs)
- Security Issues being driven by NAVSEA/DUSD(L)/JCALS
- AMC Data & Systems COOP (Continuity of Operations)

Summary of Open Software Problem Reports (SPRs)

Request Site	Number Open	Scheduled & Test
AMCOM(P)	72	21
ANAD	2	0
ARDEC	0	0
CCAD	2	2
CECOM	12	2
LEAD	2	0
RIA	5	0
RRAD	1	0
TYAD	0	0
Army Total	96	25
DoD Total	274	48

CDEX Milestones / Status
Directed By AMC GEN Wilson



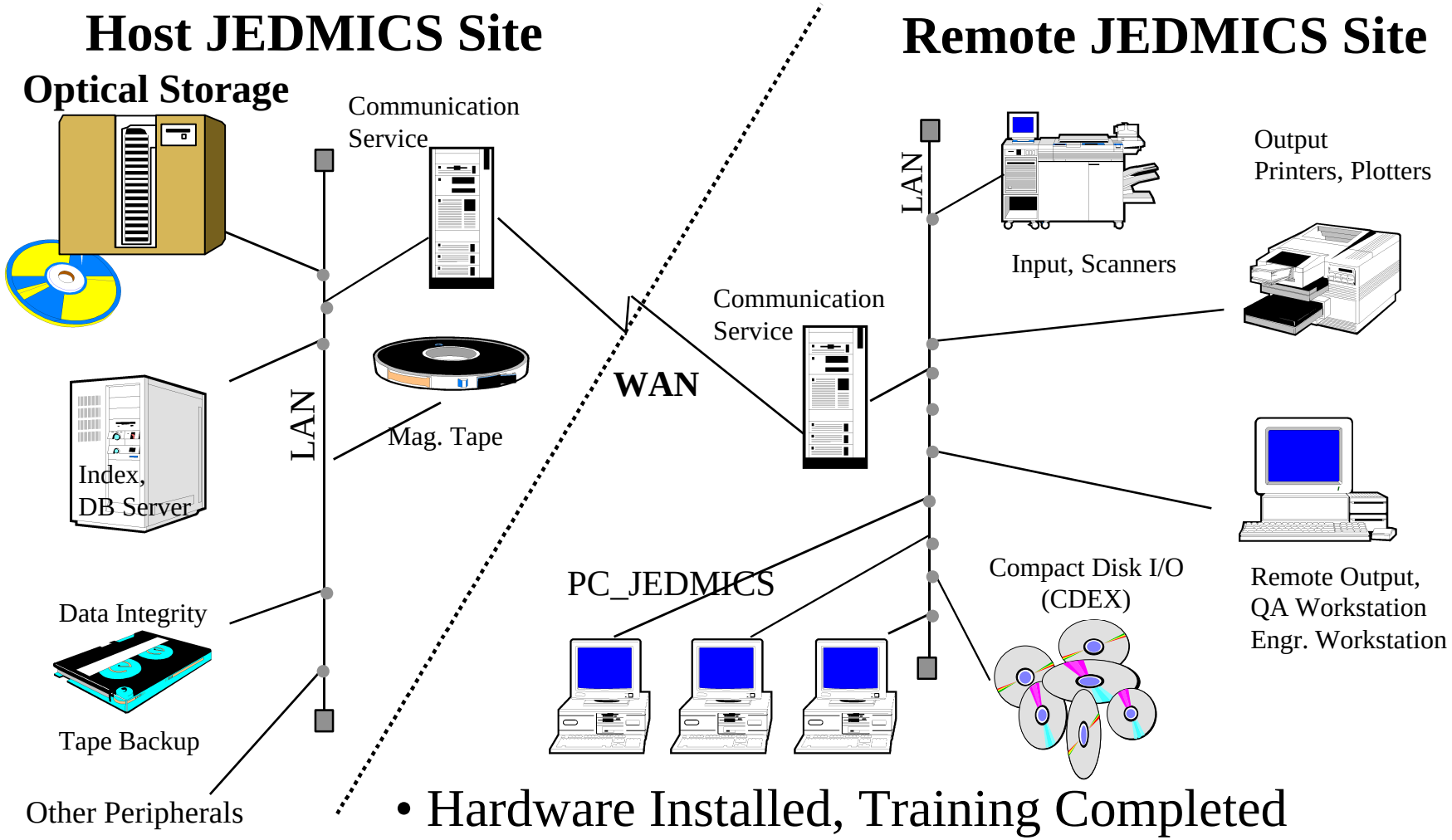
- JEDMICS Data Structure facilitates exchange

Digital Data Delivery Enhancements

- Jun. 97, IndexR 2.1 Released, Improved Build DLF Tools
- Jun. 97, PC-JEDMICS 2.1 Released
  - Improved Upload Tools, NT Server Capable
  - CALS 1 to C4 Raster Image Converter (Win or SUN)
- AMCOM (P), Contract Data Delivery Document MIS-52406C in final approval phase ... enable CD based delivery
- GE Aircraft Engines, DoD Single Process Initiative (SPI) for Digital Data Delivery via CDEX
- 1 Aug 97, GSA DoD Wide Contract for CD-R Media

* Reminder: Register on EDMS web site to receive email of events, news, updates, information !
http://wwwedms.redstone.army.mil JEDMICS Tool Set

Remote Site Architecture
Soldier Systems Command



- Hardware Installed, Training Completed

AMCOM (P) Site Status

presented by
John Montgomery, EDMS PMO (systems)
and
Carla Crawford, AMCOM (P) RDEC (functional)

ATCOM BRAC EDMS Status

A few milestones from the 450 activity EDMS plan:

- ATCOM JEDMICS Data Migration & Split Completed
- Off-Line Platter Copy Process Complete
  - Troop Data Delivered to CECOM/TACOM
  - Aviation Data Delivered to AMCOM (P)
- Platter Import Completed at AMCOM (P)/CECOM/TACOM
- Aviation TDCMS moved to Redstone and operational
- Merged TDCMS (ICAPP) scheduled for completion Oct. 97
- ATCOM DSREDS “Hot Backup” Status till Sep. 97
- ATCOM JEDMICS DIGMIG Server remain till Sep 97
- Aviation and Missile Business Process Transition Underway
- ATCOM DSREDS New Data “Close-out” in-process

AMCOM (P) JEDMICS Milestones

- Mar 97, Installed Server Upgrade, RAID, Remaining Peripherals
- May 97, Import of Aviation Data to AMCOM JEDMICS
- June 97, Install Aviation area peripherals/printers
- 1 July 97, Began Production Output from JEDMICS
  - MICOM DSREDS in “Hot Backup” Status (no data input/output)
  - Compact Disk Output from JEDMICS from TDCMS “Pull File”
- Continuing to prove out Aviation Process (limited live buys due to funding)
  - Stand up dual aviation and missile business process on single JEDMICS

- Issues Being Worked:
  - Lack of personnel arriving from ATCOM to handle work load
  - Excessive Down-time due to Automated Disk Loader (ADL) maintenance ... 4 Aug. rebuilt of ADL
  - Resolve problem with Aviation data Acc. Doc. pointers (Problem in Platter Export/Import ... Re-migrate some images
  - Printer Queue Daemon Problem delaying plotter output (SPR)

AMCOM(P)

JEDMICS IMPLEMENTATION

Presented by
Carla M. Crawford
Technical Data
Management Div

14 August 1997

Functionality Review

Functionality	Equal Performance	Enhanced Performance	Productivity Loss
◆ **Building/Submitting Lists**	**X**		
– **Viewing Images**		**X (30+%)**	
◆ **Requesting Pull Tape**	**X**		
– **Printing Output**			**X (60%)**
– **Media Output**			**X (~30%)**
◆ **Daily Downloads**			**X (53%)***
◆ **Document Directory**	**X**		
◆ **Limited Rights Data**		**X (100%)**	
◆ **Printing Images**			**X (60%)**
◆ **Accompanying Documents**	**X**		
◆ **Electronic Transfer of Data**	**X**		

* Software Enhancement Developed.
Awaiting Production Cut-In.

Potential Solutions

- Identify Software Enhancements
- Analyze Current Business Process
- Hardware Solutions
  - Larger Monitors
  - Additional Printers
- Additional Training

JEDMICS

Joint Engineering Data Management Information Control System

presented by
Steve Zukowski

CECOM

August 14, 1997

HISTORY

Major Events	Date
JEDMICS Repository Fielded (Phase I)	JUL 95
JEDMICS Fielding Continued (Phase II)	JUL 96
JEDMICS Fielding Completed (Phase III)	JAN 97

HISTORY

- Continued -

Major Events	Date
ATCOM Data Loaded	MAY 97
DSREDS Turned Off	JUN 97

CURRENT STATUS

Developed at CECOM

- Pullfile process automated with minimal human intervention.
- Eliminated aperture cards for procurement bid sets, requests for technical data and distribution.
- Automated software backup procedures, to eliminate system downtime during duty hours.
- Developing an automated revisioning process.

OUTSTANDING ISSUES

- Someone has to verify all images are in the file before outputting(CD, ftp, etc.)
- Daemons stopping causing system or job to stop. System has to be rebooted to start again. Problem is sporadic, PRC has not been able to fix. We made the first call on this problem 11 Feb. 1997.

(DAEMON is a utility program within the UNIX system that works in the background and comes into play only when needed).

OUTSTANDING ISSUES

- Platter copy/Import doesn't work properly - we tried to copy one side of a platter for COOP purposes, after it ran for several days, there was a "hiccup" in the network which caused the job to stop, the job could not be restarted where it left off and the $450.00 platter was ruined.

FUTURE STATUS

- Hardware/Software Maintenance Support ?
- Tech Refresh $ for ‘98 & ‘99 ?
- Year 2000 Compliant ??

Rock Island Arsenal

JEDMICS/CDEX

STATUS

14 AUG 97

RELEVANT

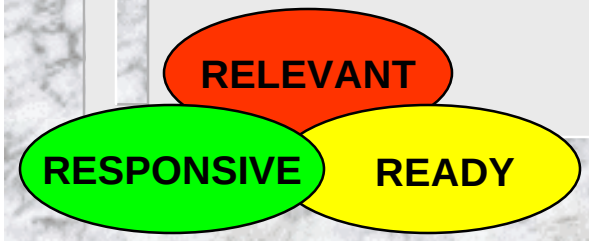
RESPONSIVE

READY

JOHN BENDER
Information Technology Directorate
Email: SIORI-ITP
DSN Phone/Fax: 24277/28021

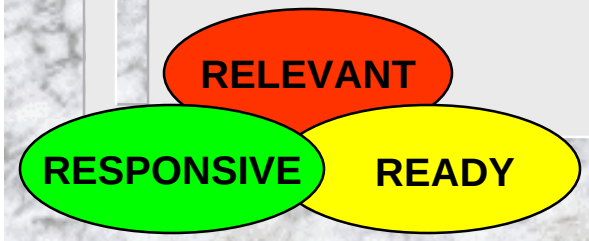
JEDMICS

- Operational 1 Oct 95 (Ran Parallel with DSREDS until 31 Mar 96)
- Currently 1016 profiled users (38 Multiple Service Sites)
- 87,000 hrs of usage 1Oct 96-31 Jul 97 (Usage Increasing)
- Scanning from remote location (Savanna Army Depot)
- Utilizing pull file capability to support CBDCOM
- Electronic transmission,storage and conversion of data other than present JEDMICS file type
- Dial in support for customers without NIPERNET access



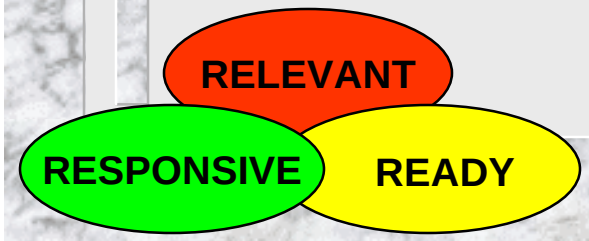
JEDMICS ISSUES

- Lack capability to restrict users to specific commodities
  - Submitted SR NR. 9758822 16 May 97 (PM JEDMICS)



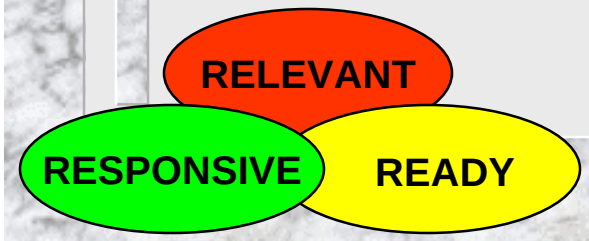
CDEX

- Installed September 1996
- Total CDEX acquisition support to HQ IOC and ACALA began 13 Jan 97
- As of 31 Jul 97, RIA has produced 15,000 CD's in support of Acquisition
- All Technical Data Packages are distributed on CD's



CDEX EXPERIENCES

- Initial Hardware problems
  - Caused replacement of three CD writers and two transport stations since Sept 96
- Contractors experiencing problems loading and printing images.
  - Recommending 166 or better Pentium with 16MB Ram as minimum and update printer scripts
  - Microsoft Access files created for any CD's with more than 25 images (Improves time on database loading from CD)



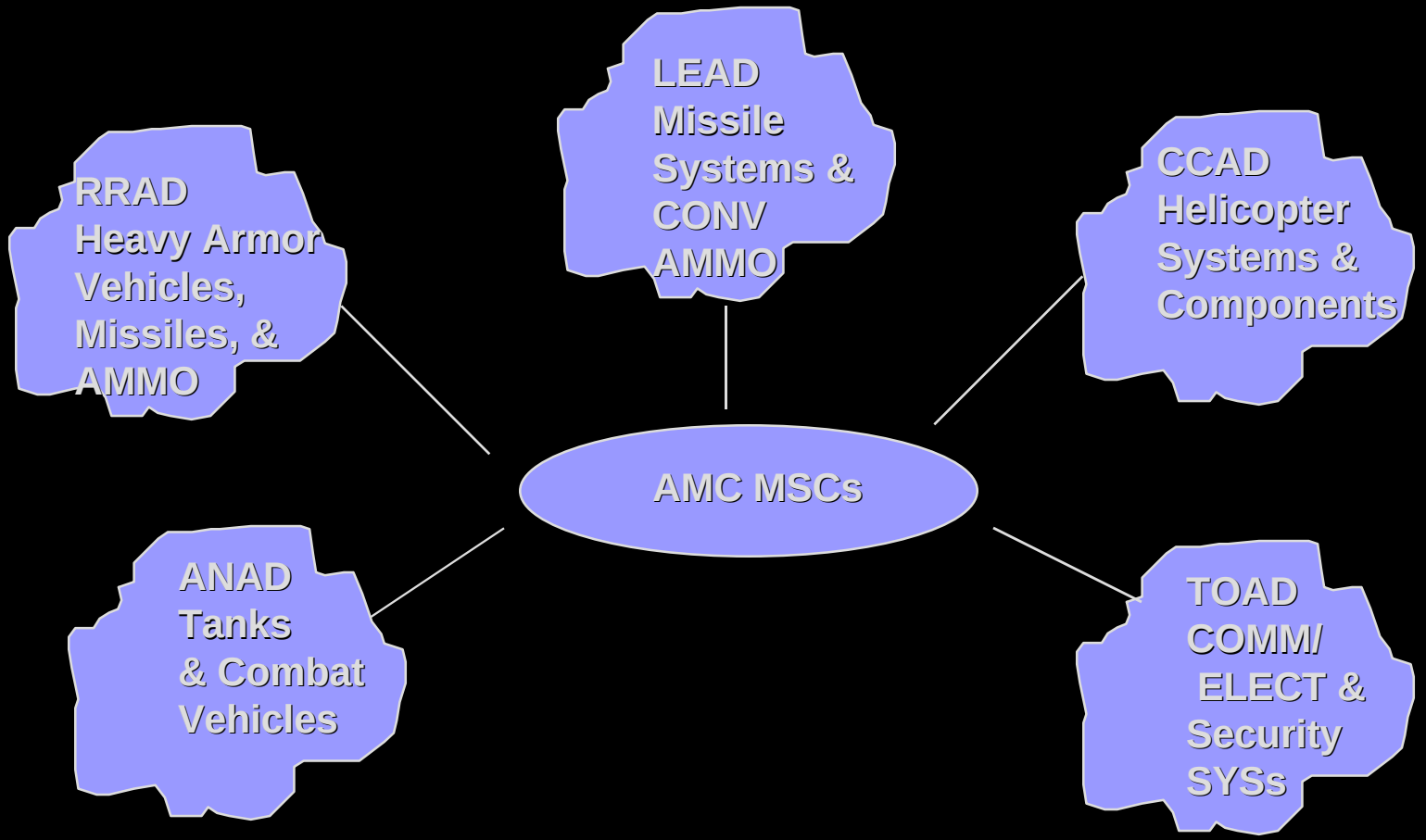
IOC JEDMICS UPDATE

READY, RESPONSIVE, AND RELEVANT

14 AUG 97

Mr. Wilbert A. Ensenat
AMSIO-SME-A
DSN 793-5175

JEDMICS AND IOC DEPOTS



What JEDMICS Means to Depots

- VIABLE & VALUABLE RESOURCE TO MEET TODAY'S DEMAND
  - PROVIDES VEHICLE TO STORE, MANAGE, & MOVE TECH DATA ELECTRONICALLY
  - REQUIRES LESS RESOURCES & SPACE IN EVER SHRINKING WORKFORCE

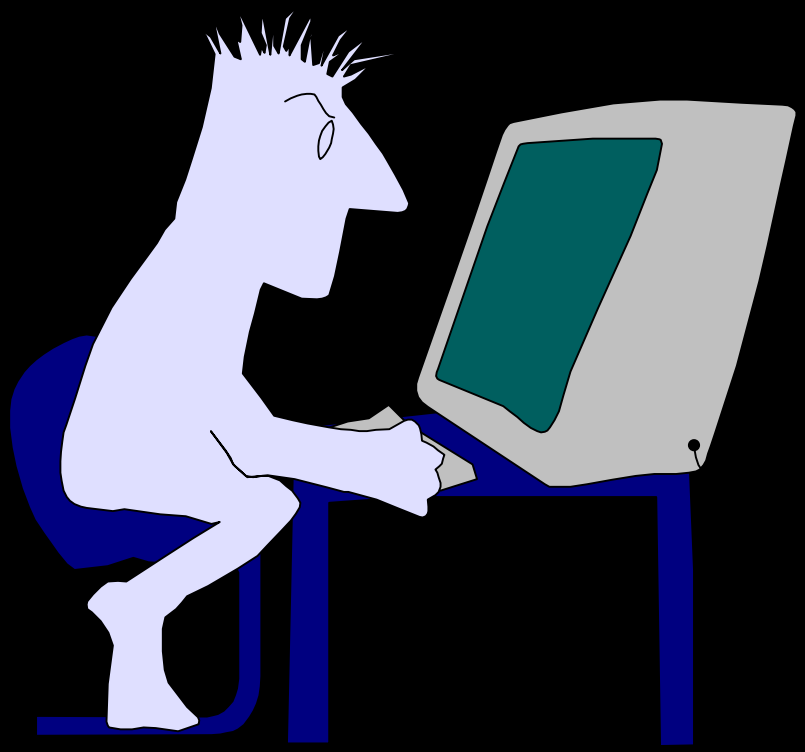
JEDMICS Status At Depots

- **Mini JEDMICS System to store, retrieve, and replicate TECH data to support maintenance, repair, overhaul, & training procedures locally & abroad**
- **Depots consider system effective for intended applications**
- **Effects of downsizing/reshaping are impacting progress for optimum use**

JEDMICS Status At Depots

- Depot systems up & running to provide:
  - Improved data retrieval to support shop personnel
  - Improved replication ability to support acquisitions, maintenance, repair/overhaul, and training
  - Eliminates storage and handling problems

Barriers & Problems



- **Availability/Retrieval of Data from remote sites (MSCs)**
  - **Current network setup too time consuming**
  - **Some MSCs reluctant to permit depots direct access to primary repository**
  - **Need to identify more effective way to migrate massive data from MSC to depot**

Barriers & Problems

- Need AMC to impose standard policy on data exchange/repository access provisions
- Depots should have direct access to required MSCs to accomplish mission
  - Minimizes resources & manpower to migrate data
  - Provides depots ability maintain DWGs to latest revision

TACOM

Mobility and Firepower
for America's Army

JEDMICS

Joint Engineering Data Management Information Control System

presented by

TACOM-Warren

Patricia Martinez
Team Leader, EDI/CALS

August 14, 1997

HISTORY

Major Events	Actions Taken
Installation (mig eng)	March 1996
System Fill Out	October 1996
2.5 installation	February 1997

HISTORY

- Continued -

Major Events	Actions Taken
TECP 38/52	April/June 1997
Business process	July/Aug 1997
DSREDS shutdown	Postponed from July 1997

CURRENT STATUS

- Writing code for internal PWD process for JEDMICS
- Hardware problems have delayed production
- Must migrate 1.2 platters from DSREDS
- Starting user installs

FUTURE STATUS

- Plan to be in production NLT 30 Sep 1997
- Plan to use web for review and distribution
- Storage and retrieval of other data types
- Need full integration with workflow manager

OUTSTANDING ISSUES

- No COOP plan
- Viewers not up to date with network capabilities
- Need WWW compatibility
- Maintenance warranty expired prior to prod
- Need written certification of Y2K compliance

TACOM

Mobility and Firepower for America's Army

JEDMICS

Joint Engineering Data Management Information Control System

Presented to

Mr. Dale E. Adams

Principal Deputy for Acquisition

AMC Headquarters

August 14, 1997

presented by

Carol A. Sitroon

Chief

Engineering Data Archive Branch

EDMD

Engineering Data Management Directorate

TACOM-ARDEC

HISTORY

Major Events	Dates
Migrate DSREDS Data To JEDMICS Format	Jun - Aug 96
JEDMICS HARDWARE/SOFTWARE INSTALLED	28 Oct 96
Training and Installation Complete	Jan 97
PM EDMS/ARDEC Meeting	10 Jan 97
Deadline to Eliminate Aperture Cards	31 Jan 97

HISTORY

- Continued -

Major Events	Dates
TECP 38 Installed	23 Feb 97
TECP 51 Installed	25 Apr 97
TECP 52 Installed BETA	4 May 97
Production Version 52 Installed (allows auto method of images)	2 Jun 97
PM EDMS Meeting	20 May 97
Converter Installed	22 July 97
Automation of Conversion Process	In Process

CURRENT STATUS

- Verifying JEDMICS/DSREDS Database
- Writing program to automate converter from and/to CALS Type 1 data from unique JEDMICS Format.
- ALL CD to TACOM-ARDEC Procurement/Jan 97
- CDs created from DSREDS/Not JEDMICS In CALS Compliant Format
- JEDMICS currently not integrated into Business Process/Work Around
- Developing program to automate Business Process with JEDMICS
- Continual Internal Training Schedule
- Marketing New Customers

FUTURE STATUS

- Building Security Walls to limit access where appropriate
- Develop procedures to improve operational status & reduce maintenance costs in the out years
- Develop Digitization Plan to automate drawings currently not in the JEDMICS
- Develop Programs for minimal human intervention on JEDMICS

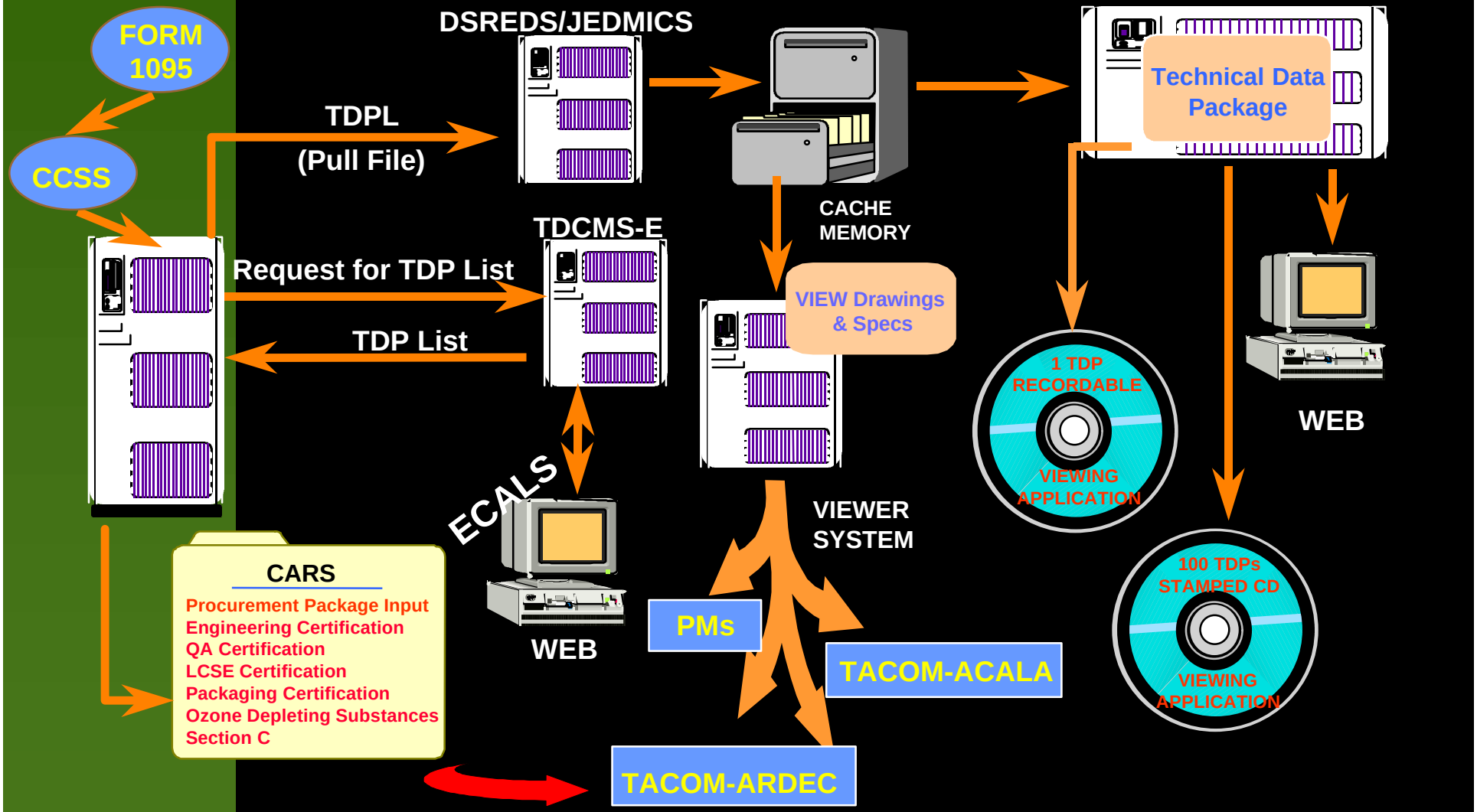
OUTSTANDING ISSUES

- 1st Yr Free Warranty all but exhausted prior to operational status
- PM has No Tech Refresh Dollars for Out Years
- Log File Required to Automate the status of available drawings in request
  * Note: Received 12 Aug 97. Being analyzed by ARDEC
- Important Reports not provided for JEDMICS (Provided for DSREDS)
- System is not able to define what drawing is on a particular platter
- Need for Capability to do tape export/import between DSREDS/JEDMICS
- Original Commitments changed by PM EDMS/JEDMICS without Coordination
- JEDMICS is a computerized tool - needs to be integrated into each MSC business process
- Y2K Implications

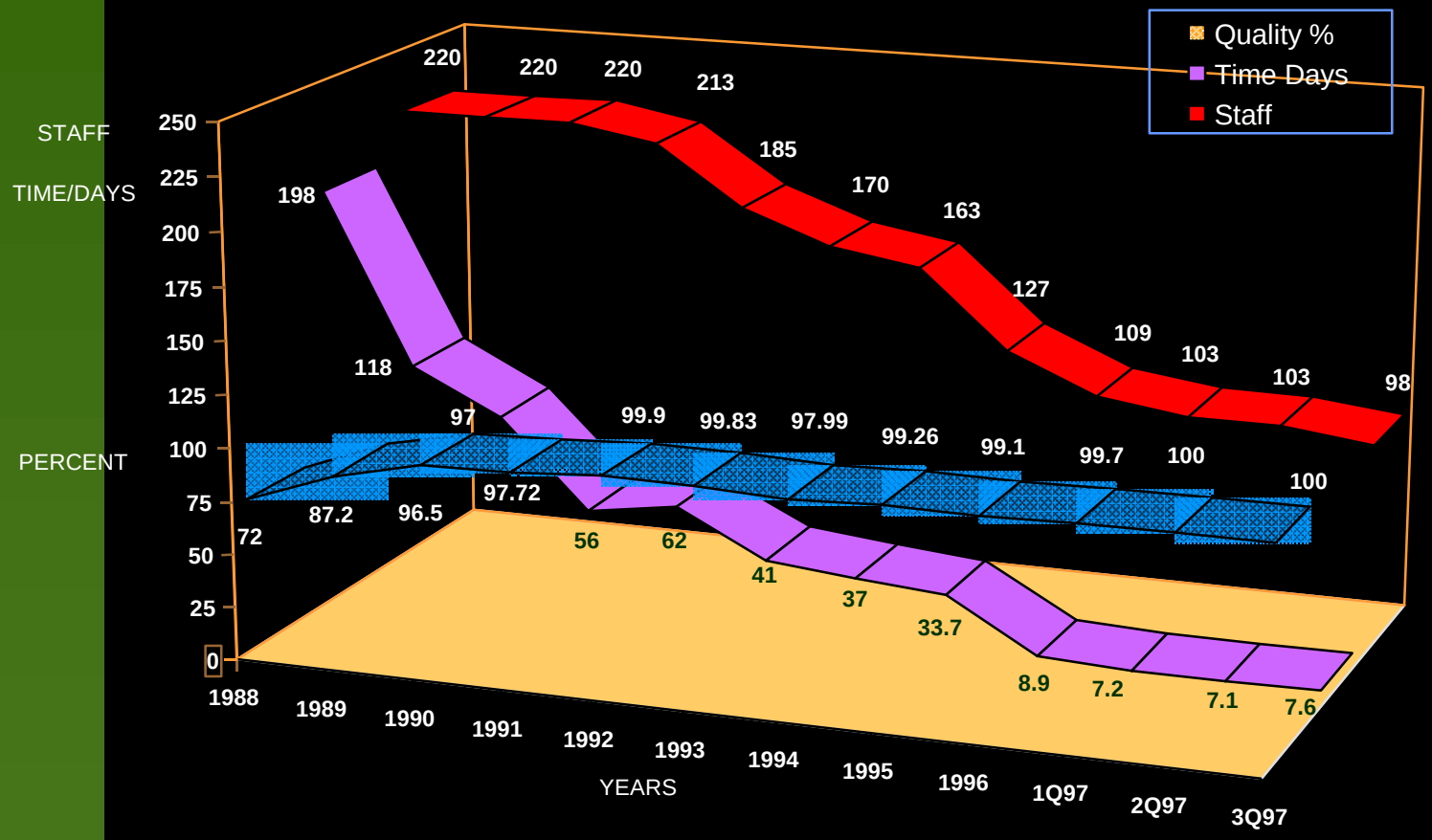
RECOMMENDATIONS

- Developer and Tester of Hardware/Software needs to be separate
- Meetings VTC/DTV to discuss problems/issues/solutions need to happen at least Quarterly with coordination and concurrence by MSCs
- MSCs need to sign-off on contractor delivery orders
- Need to define relationships between user access, security, CITIS, and Product Data Management (PDM) for JEDMICS

BUSINESS PROCESS



Secondary Item Technical Data Packages Continuing Quality and Performance Improvement



BUSINESS PROCESS DESCRIPTION

- Developed applications to provide quality/timely Data
- Single Process Initiative
- Applications are integrated and “talk to each other”
- Prepositions Tech Data for immediate user interface
- All Electronic/On Line Access
- Webable Applications
- Security Addressed in all Phases of the Process
- All CDs to local Procurement
- Over 900 Customers/Industry/Government